THE

SOUTHERN PLANTER

DEVOTED TO

AGRICULTURE, HORTICULTURE, LIVE STOCK AND THE HOUSEHOLD.

Office, 26 Wilkerson's Hall, Ninth Street.

T. W. ORMOND. - - - - - PROPRIETOR.
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W. C. JACKSON, - - - - - ADVERTISING AGENT.

46th Year. MARCH, 1885. No. 3.

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[ESTABLISHED 1866.]

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SOUTHERN PLANTER.

DEVOTED TO

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T. W. ORMOND, - - - - - - - - PROPRIETOR.
W. C. KNIGHT, - - - - - - - - EDITOR.

46TH YEAR. RICHMOND, MARCH, 1885. No. 3.

SELF-SUPPORTING EMPLOYMENT FOR LADIES IN THE SOUTH.

[This is another of the series of the Blair essays. Its author is Miss M. R. Bright, of Greenwood, S. C. It was one of the closest contestants for the first prize, and is well worthy of publication.—ED. S.P.]

Woman's true position in society has been, ever since the world began, a subject of earnest discussion. Reams of paper have been wasted in arguing the question as to whether her mind is equal or inferior to that of man. While such empty questions were under consideration, woman's toilsome life was no whit brighter for all the arguments, *pro* and *con*. It is a proof of real progress, that mankind has left the female intellect to seek its proper level, and has begun to provide employment for woman, and to educate her for her work. Schools of training are being established in every department of labor, and she is urged to develop her physical and intellectual powers to their fullest extent.

Necessity long since forced this subject upon our sisters of the North. With a dense population, and nine months of winter, woman's labor was a question not of propriety, or suitability, but of existence. In consequence, the shops, factories, offices—every available place in the North has long since teemed with women struggling for bread.

In the South, the question did not assume such importance. With a mild climate and a fertile soil, we knew little of the conflict for food. True, we read of freezing and starving women and children, but it was a romantic tale, the truth of which we could not realize.

Slowly, but surely, society changes its tone, its customs, its wants. Many who in the past enjoyed luxury, are now compelled to support themselves by labor. Thus, the question of suitable employment for Southern ladies becomes one of practical interest.

Until a period very recent, the avenues of employment for woman in all lands were few, and in those few, the rewards were too small to tempt any but persons driven by necessity. In the North, many of a poor but respectable class sought service in families; others found employment in the cotton and woolen factories. These occupations not being adapted even to the poorer classes in the South, we see that Southern women were more restricted in a choice of employment than were those of the North. The Southern woman of average intelligence, when driven to support herself, was left to choose between the needle and the millinery shop. If well educated she generally became a teacher. There was no question of fitness for her work, for she had no choice. After the Civil War, these few employments were not adequate to meet the wants of the thousands compelled to labor for bread. Our ladies, trained only to adorn home, were unprepared to face the stern realities of life. A Charleston editor says of these days, "It was a painful and heart-breaking struggle for daily bread."

However severe this dicipline proved it taught us the useful lesson, that women should be trained to deal with practical life. In an age and a country in which property is never secure, every woman, whether wealthy or poor, whether of a higher or lower class, should be an industrious, useful, and self-reliant being, able, if circumstances demand, to sustain herself. In thus preparing herself for life, she need not abate one jot of the delicacy and retiring modesty which are the crown of a Southern woman. The days when a Southern lady may be a beautiful cipher are no more. In a time when the locomotive and the telegraph are feeble emblems of the rapid progress of mind, our women must, for their country's sake, advance with the rest of civilized mankind. They must study the best methods for improving their condition; must find what departments of labor are best suited to the South, with its peculiarities of climate, soil, productions, social customs, laws, &c.

Necessity, rather than philosophy, however, is teaching us these lessons, and in obedience to its law, we have entered many new fields of labor. Agriculture, manufactures, trade, the learned employments—all have been attempted by Southern ladies. Untrained as they were, they have succeeded sufficiently well to show that both by themselves and the world at large, their powers have been greatly underrated.

In the study of those departments of labor into which women may enter, we find that agriculture has been by no means barren of results. Ordinary farm work, even in its severest forms, is not unknown to them. In Europe, we find that they share the worst labors of the farm; they, as well as the men, follow the plow and bear the heavy burden; nor do they, on this account, seem to

think their lot a hard one. Whether because American women are essentially less strong, or because the American idea of woman's social position forbids, it is true that our women of the laboring classes do not generally undertake severe farm labor. It must not, however, be understood that they have been entirely excluded from such work. From the census report of 1880, we learn that the United States contains more than 500,000 female agricultural laborers. These, of course in the North consist of the hardiest daughters of toil, and, in the South, are confined almost exclusively to colored women. The same report numbers 56,809 female farmers and planters, and 1309 female gardeners and vine growers. As our Southern climate is not favorable to the farmeress, we must look for the greater number of these to the Northern States. Yet, a Southern farmeress is by no means an unknown thing.

During the Civil War and the years immediately succeeding, there were many female farmers. The husband absent or dead, the very lives of the family dependent on the little crop, many a Southern woman found herself compelled to do the roughest of outdoor work. Often a poor mother, with no aid except that obtained from two or three children, planted, tended, gathered and stored the crop. Some women aided in supporting the family by hauling wood for sale to the adjoining villages.

During the year which Sherman's army overran Georgia, almost the entire crop of the northern portion of the State was gathered by the women. The country north of Atlanta being long occupied by Federal troops, the men were compelled to flee, leaving the growing crops to be tended by their wives and daughters. When the harvest came, these women collected in bands, going from farm to farm, and gathering the crop of each in turn. But for this, that section of the State would have been reduced to starvation.

Southern women, at that time, were frequntly called on to superintend large plantations employing numbers of workmen; with a resolution that rose to meet the emergency, they proved equal to the task. An instance of this kind occurred in a large plantation situated in a section of Georgia then occupied by but few whites. The superintendent being called to the army, his duties devolved on his wife. With nothing masculine in her disposition, a simple hearted cheery woman, she proved able to perform these duties, and not an interest of the large plantation was allowed to suffer. At one time she had to deal with a rebellious runaway workman, a powerful black. Without the quiver of a nerve, she alone arrested him, and, revolver in hand, marched him before her to the nearest point where she could deliver him to the proper authorities.

Such instances, however, are called out by great emergencies, and serve only to show what women can do when aroused.

There are, however, employments connected with agriculture, in which she may successfully labor. Among these, we may mention the dairy. Much of

the outdoor work is suitable to men only; yet, in the South, the part of the work calling for less exposure may easily be performed by women. The extreme Southern States are not considered favorable to large dairy farms; but, even in these, much might be done that has hitherto been neglected. The worthlessness of the dairy, in the South, arises to a great degree from the fact that in the absorbing interest of cotton, tobacco, rice or sugar plantations, the whole care of the cows is left to negligent hirelings. If any lady, owning a few cows, will try the effect of constant supervision of the quantity and quality of the food, the manner of milking, and the disposal of the milk and butter, she will be surprised at the result.

Another employment, equally interesting, and requiring little exposure to inclement weather, is the care of poultry. A lady owning a home too small to permit large farming, might well connect the care of a few cows with the rearing of poultry, on a moderate scale. By giving her personal attention to these interests, she could easily gain an income sufficient for support.

The preparation of fruit for the winter market might be made a source of profit. Throughout the South, large quantities of fruit every year run to waste. A lady could, at small expense, prepare conveniences for drying fruit, for canning it, for preserving it in many ways to make a dainty winter repast. With our unlimited facilities for fruit raising, it is strange that it is so neglected. Our more thrifty Northern neighbors would make a respectable income from what we allow to rot on the ground.

To one living near a large town, the cultivation of flowers, berries, &c., would be profitable. Ladies near New York and Philadelphia, by selling plants, cut flowers, bouquets and berries, gain a larger profit than could be derived from sewing or teaching.

The care of bees, our ladies could make pleasant and profitable.

A Louisiana lady, left without means, utilized all these small industries. A cart was each morning filled with the products of her home, and sent by a trustworthy agent to the adjacent village. There were a few fat fowls, the best of her vegetables, a basket of strawberries, or some other luscious fruit; some fresh butter, beautifully stamped; a dish of curds and rich cream; another of the honey of that region, fragrant with the breath of orange groves—the whole bearing the impress of the daintiest taste. A sight of this cart before the door, was enough to tempt the dullest appetite. How many Southern ladies might, with industry and care, follow her example and derive a comfortable income.

Silk culture is attracting attention in the United States; and to some extent, in the South. Attempts have been made, at various times, to render it profitable. It has hitherto been found difficult to compete with European establishments. A recent newspaper informs us that in the silk mills of Italy, girls of fifteen, for a day's work of seventeen hours receive twelve cents; and that by a system of co-operation, they manage to board for half this amount. As American operatives could not live on such wages, we can comprehend some of

the difficulties to be overcome. Notwithstanding, new attempts have been made to develop the indnstry in this country, and with some success. Many women, both North and South, are testing its possibilities. In silk mills of the United States, we find more than nine thousand women now engaged. As these manufactures improve, so will the culture of the silk worm, thus offering employment to Southern as to Northern women. All these employments are suited to persons accustomed to country life, and to outdoor exercise. Those who live in towns must seek other means of earning a livelihood.

Thousands find employment in sewing, and the modern sewing machine has greatly increased the number of these. With all the advantages, however, of the sewing machine, there are some serious disadvantages. It is asserted that no other work so completely exhausts the body. In turning the machine, every muscle is brought into activity, and the stooping position necessary to keep the work in place, contracts the chest, bringing on all the evils resultant. Those who have become exhausted in other employments may, by changing the occupation, restore the wasted powers. We are told, however, that the sewing machine women, having exhausted the whole system, is unable to recuperate.

The great inventors of the day are in every business relieving us of the burden of toil. We plow, sow, and reap by steam. We pick cotton, separate it from the seed, pack it, card, spin and weave it—all by steam. Let some great mind, "on charitable thoughts intent" invent a sewing machine in which the motive power will not involve so terrible a waste of muscular strength.

The idea, once so prevalent, that women are incapable in business life has disappeared before facts. They occupy successfully places of importance in business houses all over the land. The government offices in Washington are filled with busy women. In spite of jealous opposition, these have proved themselves capable. It is said that in some of these positions, involving quickness and delicacy of perception, they excel male employees.

Telegraph offices, both North and South, are frequently filled with ladies, and, in places not requiring night work, the business is suitable to them. In Atlanta, Ga., we are informed that in the printing offices ladies are engaged in setting type. Though we have not learned the success of this experiment, there is no reason why it should not prove satisfactory. Involving a standing position of the body, however, it is necessarily a fatiguing occupation.

The idea is slowly gaining ground in the South that a woman should have some business knowledge, not being, as hitherto, the prey of every financial shark. Hence, in our common schools, our girls are receiving more thorough instruction in arithmetic and other studies useful in business.

Saleswomen and ladies engaged in the various forms of trade are increasing in number in the United States. Many causes render commercial employments less disagreeable than they once were. Employers are less exacting and more considerate of the comfort of those under their control, regarding them less as money-making machines and more as fellow beings. Formerly, women employed in mercantile houses were allowed only the lower and less profitable

positions, and no encouragement was offered to induce them to fit themselves for better situations. Now, however, they frequently fill places involving both profit and responsibility. Statistics report in the United States more than two thousand female book-keepers and accountants. Southern ladies generally dislike this class of occupation. Yet, when we consider that they do not require severe physical exertion, and are free from exposure to inclement weather, we cannot despise such opportunities for gaining a livelihood. If duty calls a lady to measure ribbons, velvets, and silks, to retail sugar and coffee, to fill a book-keeper's desk, or a telegraph office, or even to set type in a printing office, she can do these things with perfect modesty and dignity. Such employments are far preferable to the grudging bounty often bestowed by relatives and professed friends.

Ornamental fancy work has ever been given up to ladies. In Europe and in the Northern States, this kind of work furnishes employment to many. In the South, however, we have used it only for embellishing our homes. Few attempt the higher and more artistic forms, and still fewer attempt to make it profitable. When, a short time ago, there was a call for fancy work of high order, and an attempt made to open a market for such work, for the benefit of Southern women, there was a lack of skill sufficient to answer the demand.

In china painting and other decorative arts, in designing, in engraving—in all kindred industries, the South is far behind. Women in Northern cities furnish designs for manufacturers of carpets, wall paper, furniture, calicoes, oil-cloths, &c., Some ornament trays, toilet sets, chinaware, while others paint photographs. Women draw on wood the scrolls, ornamental letters, &c., used in printing books, papers, business cards, &c.,

If a Southern lady wishes a design for embroidering or other fancy work, she sends North, and gets one made by a Northern girl with no more taste than she herself possesses. As our ladies are not at all lacking in taste or love of the beautiful, this neglect seems surprising.

The cause lies partly in the pecuniary embarrassments, which, since the war, have so retarded the progress of the South. We have been too busily engaged in building up our ruined fortunes to spend time and money in the gratification of our love of beauty. A deeper cause, however, is our indisposition to undertake any new or untried employment. Because these things have not hitherto been done by Southern women, no one thinks of inquiring whether or not there would be sufficient call for such work to render it profitable.

A few years since, Peter Cooper, of New York, proposed to present to South Carolina a set of buildings to be used as a school of design for Southern women. He asked that a sum of money be added by the State as an endowment fund. The State authorities declined the gift, on the plea that the country was not prepared for such a movement, and that the school was not needed by the ladies.

In high art there is in the South, in so far as regards the women, a complete dearth. While a few derive some profit from a knowledge of sketching and painting, none have attained to celebrity. Quite recently, however, more in-

terest has been manifested. Decorative art has been more generally introduced into the female schools. An art school has been established in Charleston, where considerable attention is paid to china painting and other kinds of art. In this school, it is said that some creditable work has been done. Yet, it is a local school, intended rather to develop in the citizens a love of art, than to exert a general influence.

As our financial interests improve, doubtless artistic talent will be developed. We hope soon to see established a school of design on a scale large enough to exert an influence over the whole country. Notwithstanding the opinions of wise men to the contrary, we believe such a school would, even from a business view, be beneficial to the South. Even now, there is more call for such work than at first thought appears. Southern publishers, it is true, are not able to have expensive illustrations. People are not able to buy costly pictures and other decorations. Yet there are few, even of moderate means, who do not get from the North house decorations, fancy designs, ornamental work of many kinds, which might be furnished by home industry. Every book printed in the South, every newspaper, uses the simpler forms of wood engraving. Every business sheet contains illustrations to attract notice to some flaming advertisement. These simple illustrations are all obtained from the North. There is scarcely a town of any size where a lady cannot get employment in coloring photographs. Yet people say there is no need for a school of instruction in artistic work.

Of those employments requiring more or less of intellectual culture, the number open to ladies is small. A few ladies write for lawyers and business men, and the number of these might be increased. Still fewer attempt to earn money by writing for the press, but these are more to be pitied than those following a more laborious occupation. Southern periodicals, partly from financial pressure, partly from mistaken policy, seldom make the business profitable, even to the most talented writers. A Southern writer must look to the North for employment, and, with the country already teeming with literary aspirants, the prospect is poor. Since nothing is to be gained but the empty honor of writing for the press, our ladies of intellect seldom enter the arena as literary composers; therefore, the Southern authoress, with a few honorable exceptions, remains undeveloped.

The attention of ladies, both North and South, has recently been directed to the medical profession; and much discussion has arisen as to its suitability to women. Timid and prejudiced minds start with horror, and class the lady physician with the female clergymen, lawyers, and presidential candidates, who have made such an unenviable reputation. Those of more advanced ideas contend that the study of medicine is proper for ladies, and that the interest of humanity require that the profession be open to them. In spite of opposition, the new idea is gaining ground. We find entered on the list of medical schools in the United States, five devoted to ladies; namely, one each in San Francisco, Chicago, and Philadelphia, and two in New York. We hope that this list will

soon be swelled by one in the South. There are also, in the United States, eighteen training schools for nurses, of which one is situated in Charleston S. C.

The Woman's Foreign Missionary Society, of the Methodist Church South, has recently sent a lady physician to labor with the Mission Church in China. Since she has spent several years in a Medical College and in a female Hospital, she goes well equipped for her work. Those connected with the same church in the Indiau Missions of the West, are pleading that a lady physician be educated and sent to them. Here, as elsewhere, we see that necessity controls and educates public opinion.

People of judgment must desire to see Southern ladies interested in the Medical profession. Yet, we must confess, that of all the employments in which a lady can engage this most demands a robust body and a well-balanced nervous system.

The lady teacher has ever found favor in the South, and, as education increases, she is more appreciated. Every day new facilities are offered to her for improvement, not only in general culture, but in professional education. For the first time it is admitted that her opportunities for mental development should equal those of the male teacher. Southern institutions of learning have greatly raised their standard, though restricted means have prevented their highest development. As industry and energy remove these obstacles, her teachers will vie in intelligence with those of any other part of the world.

Woman is by nature a teacher, and the school-room is her home. The notion that a lady teacher is necessarily cross, sharp, and disagreeable, is utterly false; in no other employment are her womanly powers so fully developed; her mind, affections, and moral nature so strengthened and beautified.

While in all commercial pursuits, woman must from her nature be sub-ordinate, and has no desire to be otherwise, in the school and college, she needs opportunity alone to place her in the front rank. We hesitate not to prophesy that in a few years the schools, especially the female institutions, will be almost entirely in the hands of women. Already she has a strong voice in the education of small boys, and, as the age advances, this influence will increase. Instances are by no means unknowu of a lady's filling with credit and dignity a professor's chair in a male college.

Much, however, must be done, before the lady teacher can occupy her true place in the educational world. Public sentiment must demand teachers of higher mental culture. Our country and primary schools are far too frequently taught by half-educated girls, having no conception of their responsibility.

The teacher's profession, like that of the lawyer, should be chosen for a lifetime, and should claim an equally careful preparation. As the earliest impressions of a little child are ever the strongest, stamping the character in years of maturity, so the primary teacher requires more careful education than the teacher of more advanced pupils. Let our Southern lady teachers fully recognize these truths, and the idea of woman's intellecctual inferiority will soon disappear.

In concluding this sketch it is not improper to add a word about woman's salaries. Formerly, it seemed to be an established principle that a woman, in whatever business, or of whatever ability, must necessarily receive a smaller salary than a man. Ladies tacitly subscribed to this false doctrine, and only recently have they summoned boldness to question its justice. Did a tailor engage a profitable job, he put it out to a tailoress at half price. Whether it was a factory hand, a clerk, or a teacher, the employer hired a woman to save money, and the one fortunate enough to get the vacant place dared not question the employer's terms. A late periodical speaks of a school in which the principal's desk was vacated. The position was at once filled by a lady who had long been in the school. Though she filled it satisfactorily for several years, she received no addition to her salary.

The President of a college, whose time was much occupied by matters of outside importance, employed a lady of experience as principal teacher. In addition to her own duties, she was expected to fill his place in school, attending to all his duties of management and discipline. In the same school was a gentleman, who heard two or three recitations per day. Though grading below the lady as a teacher, he received three hundred dollars more per annum —three hundred dollars for being a man! In short, wherever a lady was employed, she was expected to do twice the work for half the money.

For the credit of humanity be it said, that the world, slowly and reluctantly enough, but surely, is beginning to see the injustice of this. There is but one true principle on the subject. *The same amount of work, equally well done, should receive the same wages, whether the workman be a man or a woman.*

It must be said that in the South there is less of this discrimination than in the North. The generous Southern nature, ever regarding woman as a being to be cherished, seems disposed to grant equal wages, more from a feeling of kindness than from having philosophized on the subject. From the school reports of 1881 and 1882, we find that of the nine States in which public school salaries of gentlemen and ladies are the same, eight are Southern States.

That union is strength, has been proved in every human institution, from the humblest department of labor, to the mightiest government of earth. As women are beginning to co-operate in their work—in temperance reforms, in missionary societies, in societies to facilitate progress and develop power in every field of labor—we may expect in the next age to see them occupy a position far in advance of anything now known in the history of the sex.

Now that winter has set in, an occasional allowance of green food may be had, when the ground is not covered with snow, for the cattle, by permitting them to graze on the growing wheat and rye, as no damage will be done the growing crop by being eaten off, provided the stock is not kept upon the pasture too closely.

THE EDUCATION OF COWS.

A cow is certainly a reasonable creature. Its instinct in this respect is greatly increased by maturnity. A cow with a young calf certainly reasons, and if we wish to make the most of her instinct and reasoning capacity we must educate her. There is in all sorts of animals a differing hereditary capacity for being educated—a reasoning debility, which aids them in understanding the desires of the owner and the means he uses for communicating this knowledge. A young calf inherits chiefly the instinct of fear and self preservation, and the first lesson it requires is to overcome this instinct, which is natural, by an effort of reason which is wholly artificial. This is taught by the constant exercise of kindness and gentleness, until the natural fear is wholly expelled, and a docile confidence in its owner is created. This is the first step in the education of cows. After this has been firmly established the cow learns by experience; and surely the ability to learn from what has passed and to exercise memory, is reason, or closely akin to it.

The first lesson to be given is the handling, and this is of the first importance, because a successful education in this respect avoids all the vices and disagreeable habits which detract so much from the value of a farm animal. The habit of kicking, which is utterly destructive of the value of a cow, may in every instance be traced to errors and sometimes vices in the early education of the animal; so too is a bad habit of withholding the milk, and all others which are so often complained of. One of these may be more particularly mentioned, viz., the habit of cleanliness. There are cows which can never be kept clean, and which seem to delight in fouling their udders, and hindquarters, and plastering sides with filth by dipping their tails in the gutter and lashing their flanks with them. This all comes from education. A well-trained cow has no such unclean habits, and once brought up in a cleanly manner will preserve the habit and save a great amount of labor and worry thereafter.

The feeding is also a manner of education. This fact is rarely thought of or considered and it is of the greatest importance. A cow is a machine for the conversion of food into milk and butter, and as the machine is more perfect, so the product will be more satisfactory in exact proportion. The training in this respect should begin with the new born calf. It is well known how any animal that has been starved in its early life is stunted all through its future existence, and how a well-fed calf will make a cow that has a large capacity for the consumption of food and its change into valuable products. The quantity of food, however, is not the only element in the calculation. Food varies greatly in its character, and as it is more highly nutritous its products are richer and more valuable. But rich food and feeding call for a peculiar disposition of the digestive organs, and one of the greatest difficulties in the way of the high feeding of dairy cows is the inability to digest the concentrated foods which their owners are desirous of using. Many cows that have not been trained in this direction fail and perish from this inability to sustain a regular course of high feeding.

It is therefore necessary to success in this direction that young animals should be "forced," as the term is, from their earliest infancy, and thus become able, not only to hold, but to use to the best advantage a large quantity of rich food, with a healthy proportion of such bulky food as may be required. In this article we do not propose to enter into details, but simply to mention a few leading principles from the consideration of which details of practice may be resolved. And there is no other question appertaining to this subject which admits of greater diversity of practice and requires more study and practical investigation and experiment than this one of feeding. Training to milking is another branch of a cow's education which should not be overlooked. It is one thing to make a good milker and quite another to keep her good. In this respect the milker needs more training than the cow perhaps, for the cow cannot be expected to be better than the teacher. Milking is a nice art and needs to be studied in the very best manner by the dairyman. We have read instructions in this respect which are altogether wrong and misleading and even disastrous in their effects. For instance, a writer once urged that heifers should be left unmilked for long intervals for the purpose of stretching their udder and making greater capacity. It is quite safe to believe that one who so thinks and advises is not a milker, and is not competent to teach the art to a novice, for he must evidently be a novice himself. For as soon as the udder is filled and the ducts gorged, the glands must stop secreting; an injurious congestive condition is induced, and reabsorption must occur, to the serious damage of the cow. There are several other points which might be referred to but we prefer at this time to merely suggest the consideration of the whole subject from the few texts here given.—*Culpeper (Va.,) Exponent.*

BARN-YARD MANURE.

DIFFERENT METHODS OF HANDLING IT.

No one questions the fact that to the farmer who keeps live stock of any kind the consideration of how he shall best manage, store and apply his manure is of paramount importance.

The many who follow in the old ruts, doing only what they have seen done before, throwing the dung, as made, out of the windows behind the cattle, to lie under the eaves, sometimes during the hot summer, and by others through winter until they plant, are of course reprehensible, because they neglect intelligent thought upon a subject of such great importance to them, often vital to their success; but others who have read and thought long and earnestly upon this subject have little satisfaction for their labor. Some of the devices for the stable to care for the manure as made, perhaps patented, seem to neat farmers ridiculous to absurdity, while possibly the neatness advocated by these appears hardly less ridiculous to the economizer who planned stanchions with sides and feed troughs so arranged that as the manure accumulated under each animal, and it so stood higher, they could be raised to any

height. He advocated high ceilings, so that as spring approached the stock might still have room to stand between the pile and the floor above them without necessitating the labor-wasting practice of cleaning the stable. We confess to more charity for that other adviser who instructs us to flush the stable floor twice a day with the hose. But he must seem finical to the general farmer, and wasteful to numerous others.

A class who would hold the inventor of the stanchion plan in holy horror, and who have the support of large numbers, and of many excellent writers, advise having a manure receptacle in the barn basement, beneath the cattle, which can be very handily reached by trap doors in the stable floors, and often couple with this plan the stabling of hogs on this manure "to work it over." Although satisfied with this arrangement in one such barn, the herdsman explained that it would'nt do to store hay over the cattle, as the breath ascending would damage it for use. Those who are satisfied with this plan would—I think many of them—object to a plan in New England barns, where the cows were tied with their heads to the outer walls of a square room, say thirty-five or forty feet square, leaving a square place behind them, say twenty feet square, into which their droppings were daily shoveled until they nearly reached the ceiling.

The plan which advises that each day's droppings shall be at once deposited on the field they are to enrich is the ideal one if it were only feasible, which it is not, for besides the impracticability of always having the field on which the manure is needed ready for its use at the time the daily deposit is to be drawn out, storms, freezing and the softness of the surface and of the intervening roadway, often make it necessary to defer hauling the manure for a few days. From what Messrs. Lawes and Gilbert have proven, and from the weight of testimony of good farmers, it seems probable that when the cost of handling and turning the manure is taken into account, the greatest economy is found in spreading the manure directly from the barn at its first handling on to land provided for it. As before said, this can not always, nor indeed generally, be practiced; and so we who don't want the manure under ourselves or our cattle must resort to some plan of storing it outside of the stable.

While exposure to the cold and rain of winter seems less baneful in its deteriorating influence than exposure to the direct sun in summer, neither are good; and if a covered manure yard can be provided adjacent to the stable, where the manure that can not at once be hauled to its final destination may be neatly piled, secure from sun and rain, the investment will doubtless be a wise one. And now I come to the point not clear to me. Shall this manure yard or court be floored? Shall it drain into a cistern? "Yes!" "yes!" "yes!" I hear in chorus. I grant you it is so writ in books, and good ones too; but a cistern and heavy cement floor are both somewhat expensive, if well made, and I sometimes think them unnecessary.

This is indeed what impresses me now as I am plan-thinking aloud and if my musings shall provoke the written thoughts and experiences of others who have considered the subject, so that they will establish

the truth or falsity of the conclusions I reach, good may result. One error that besets even those farmers that really think is that the thinking is of an indefinite, loose kind, and does not find result in some conclusion—some settlement of the question investigated—and so become embodied in actual practice on the farm.

All, I think, will agree that the place chosen and prepared for the manure pile should be hollowed from its center to its sides, so that the liquid manure should have no chance to run away from the pile, but instead, by reason of the sloping sides of the bottom of the heap, it should run to the center of the floor of the heap, where many would put a cistern; or, if the cistern is placed adjacent to the heap, then the bottom should so slope as to direct the drainage to it.

I am told that cisterns into which liquid manure drains, though theoretically good, are seldom long "run"—that is, the job of emptying them is a very unpleasant, distasteful one, and in time is abandoned and the cistern is allowed to stand unused.

Now for my inquiry, If the floor of the manure court or pile is the soft loam of the earth where it is located, will any loss occur? Of course in such case it must be freed from stone and hollowed out as it would be if a cement floor was to be made.

It seems to me in that case (except where the soil is sandy, which would not do as well if at all) the drainage from the heap will all be absorbed by the earth which—at first to the depth of two or three inches and afterward for perhaps five or six inches—would have to be removed with the manure and then replaced after each removal. This would not be an expensive process, even less so than the removal of the liquid manure by itself, and indeed the soil so used would be of positive manurial value.

Sometime since I remember reading a defense of light soils from the imputation that they leached manure through them, written by a farmer on the light New Jersey sandy soil on which such excellent berries and melons are produced. He claimed to have filled a glass tube, say thirty inches high, with the almost white soil, and on to it for months to have poured dark liquid manure. He said that only clear water came through the bottom of the tube at the end of his experiment, and that the soil was not yet black for six inches from the top. He was not afraid, while growing crops, to risk any quantity of manure on his lands.

It does not seem to me probable that a manure yard so constructed would lose any manure by reason of a lack of a solid floor, or of a cistern, while the economy of time and money in construction would be considerable and not less important. Many a one who hesitates about constructing the cement work, which involves finding and hiring mechanics, would readily undertake the provision of the other yard involving the labor only of the farm force when not otherwise employed. It is not forgotten that Messrs. Lawes and Gilbert state that in their soil some trace of the nitrates of their manure was found in the water issuing from their drains; but in stable manure there is only about four and a half to five pounds of nitrogen to one thousand pounds of manure, or say one per cent; and since the general plan is to spread

the manure when first removed from the stable, when such a course is possible, that stored in the pile under protection from rain would not be likely to remain long, and probably the waste of nitrogen would not be sufficient to justify any considerable expenditure for cistern or for a cement floor thick and strong enough to stand the strain of moving and backing farm wagons and teams.—*In Breeder's Gazette.*

A. K. JOHNSTON.

OUR EAST INDIAN WHEAT COMPETITOR.

The report of the United States Consul Leonard, at Calcutta, on the Indian wheat crop of 1884, contains facts of interest to American wheat growers, who have already found India a formidable competitor in the wheat markets of Europe. He places the crop of 1884 at 244 million bushels, the product of 26 million acres, giving an average per acre of 9⅓ bushels, as against the American wheat crop of 520 million bushels from 40 million acres, giving an average of 13 bushels per acre. The Indian crop is estimated at 46 million bushels less than in 1883, when on imperfect returns it was estimated at 290 million bushels. On the question of the transportation of Indian wheat to market, he says that Delhi occupies the same relation to the market in India that Chicago does in this country. It is 1,200 miles from Calcutta, the point of export, or about 300 miles further than Chicago from her point of export. The river Jumna furnishes water transportation for a part of the way, while Chicago has a competing water way the entire distance by lake and canal, and which keeps down rail rates during the season of navigation. When at Calcutta the Indian wheat is more than twice as far away from the European market as that at New York, giving apparently to the American farmer a decided advantage over his Indian competitor. This, however, is largely, if not wholly, overcome by the cheapness of labor and cost of living in India. Consul Leonard's estimate of the cost of wheat production is larger than have been made by other parties. It is for wheat laid down at Delhi 80 cents per bushel; freight charges from Delhi to Calcutta 19½ cents, making the cost delivered at point of export, 99½ cents. There is then to be added the transportation charges to the European markets. Consul Leonard being on the ground is of course good authority on all these points. But his estimate of the cost of wheat laid down at the primary market seems high, in view of the cheapness of labor in India. Its cost of production to the Indian farmer has been placed by some as low as 42 to 45 cents. The entire absence of improved implements and machinery in the raising, harvesting and preparing of the crop for market, adds to its cost even with cheap labor. Great Britain is rapidly extending the railroad system of India for the sake of opening up new wheat producing territory, and there is no avoiding of the fact that India is sure to become our principal competitor in the wheat markets of Europe. Our safety lies in the use of such improved methods as shall double our average per acre, enable us to grow all the wheat we need for ourselves and to help supply the deficiences of Europe on a

diminished acreage, leaving the use of the ground released from wheat growing to be used for other purposes. This does not seem to be impossible of accomplishment, in view of the fact that England's average yield is over 27 bushels per acre, and that the average of the last French crop was over 30 bushels per acre.—*Farmer's Review.*

COMBING WOOLS.

1st. Can you state what constitutes fine combing wool? What breeds or crosses of sheep produce it and where they may be found? What crossed on fine American Merino would produce it and where sheep suitable for such a cross may be had?

2d. What kind of wool and sheep would Cotswold on Mexican ewes give?

3d. I have a flock of fine Merinos and am tkinking of crossing to get fine combing wool, more mutton and better mothers. What should I do? ADDISON OLIVER.

Reply.—1st. Fine wool is necessarily Merino wool, and whenever this is long enough to be combed it is known in the trade as "combing." There is no absolute standard of length, provided it can be manipulated by the combing machinery. Where introduced, manufacturers were enobled to utilize a shorter fiber—so that in extreme instances a fiber of two and a half inches has been combed. As a rule, however, wool sorters do not consider anything "combing" that measures less than three inches, in the natural state—that is just as it comes from the fleece, without stretching.

Though length is an essential quality, it is scarcely less important than that of strength and uniformity of diameter of fibers. Without these requisites—which every practical breeder knows how to secure by uniform liberal treatment of the flock—there will be an excessive waste in broken fibers, tops, etc., technically known as "noils." This is by no means a dead loss to the manufacturer, as he can sell it to the trade or work it into a lower class of goods in which strength is not so great a desideratum, where it but takes the place of wools which can be purchased at a less original cost than fine combing, or delaine, wools command.

As above stated, there is no blood outside of the Merino, in some of its types, from which fine combing wool can be obtained. The Silesian and French types have been bred more directly in this line than the American Merino—though there are many flocks of the latter yielding fleeces of fair combing qualities. Judicious selections from these, and a rigid exclusion from the stud of such animals as do not average as well as their progenitors, may be depended upon for soon bringing the clip up to combing length, while preserving the requisite fineness.

A cross of any of the longer-wooled or mutton types will bring the wool of the cross-breed offspring up to adequate combing length, but the cross will necessarily so enlarge the diameter of the fiber as to unfit it for use in the fabrics to which *fine* combing wool is devoted.

The increase in carcass value will in many instances more than compensate for the reduced value of fleece—a consideration to be weighed by each breeder for himself after a proper study of his relation to markets, etc.

2d. Experiments in using Cotswold rams on Mexican ewes have been made in Texas, New Mexico and Colorado, but as the Merino is still so generally used there it seems safe to infer that the Cotswold grades have not made profitable pastoral sheep. The Mexican sheep has a long, coarse, open fleece. The low grade of the wool and the lightness of fleece render it unprofitable under any but the most primitive management. The fleeces average one and a half to two and a half pounds, and are suitable only for carpet manufacture. A Cotswold cross would improve it both in weight and quality, but could not be expected to do more than bring it into the lower grade of combing wools. The carcass would, of course, be vastly improved in size and meat-yielding attributes. While so many good sheep are for sale at the low prices now ruling it would seem difficult to figure out the economy of beginning a flock on so low a foundation as the Mexican ewe. The *Gazette* is not prepared to recommend such a course in view of any facts as yet brought to public notice. When good, well-bred flocks advance to double the figures at which they can now be had, it will be time for the Mexican to again claim consideration as a profitable flock foundation.

3d. Any of the mutton types will add to the size of the Merino carcass and bring its wool into the "combing" grade—but it will no longer be fine—and the breeder who succeeds in making and keeping it uniform in his flock will achieve what many a breeder before him has failed to secure. Breeders in New Zealand have been remarkably successful in establishing an intermediate variety by crossings of the Merino and Lincoln—the fleece of that variety of long-wooled sheep seeming to "nick" more successfully with the Merino than others experimented with. Experiments in this direction have been going forward for thirty years or more, and very handsome flocks, quite as uniform in appearance as the average of the "fixed" breeds in this country, are pointed to in vindication of the claim to success by those breeders who have devoted to that cross the labor and a study of a lifetime.

The fact is buyers have no little trouble in getting hold of what delaine wool there is produced in the United States. No flocks of any considerable size yield it exclusively, though in many of the best bred Merino flocks is to be found on a portion of the animals. From these clips the desired fleeces are assorted, either before sacking or after reaching the warehouse or factory—commonly the latter. The writer was informed by the proprietor of a large woolen mill recently visited that he deemed himself fortunate if he secured from an invoice of Merino wool one-tenth of the fleeces that would grade as "delaine" and even from these fleeces certain portions were to be excluded, viz: bellies, necks, flanks, etc.

In this fact is embodied a lesson for American wool-growers—the best prices are to be obtained for wools properly graded before ship-

ment or sale. Foreign wool-growers understand this, and by applying their wisdom are enabled to get into American markets with wools which would not be salable at current prices if marketed in a condition corresponding with that of the home-grown clip.

The existing demand for fine combing wools will doubtless do much to stimulate the breeding of long-fleeced Merinoes. The better prices which such wool command are powerfully supplemented by the determination of many owners to reduce the size of their flocks, in furtherance of which all animals not reaching an advanced standard will be disposed of—many of them for the shambles—the remainder for the improvement of grade flocks now, and for some time in the future, the main source of supply for the woolen mills of the United States.—*Breeder's Gazette.*

GREETINGS TO THE PLANTER, AND NEW INDUSTRIES IN BUCKINGHAM COUNTY.

Dear Planter,—You and I were good friends long before and up to the war, and your monthly visits were most highly appreciated.

The receipt of two numbers, so kindly sent me by your present editor, vividly brings back to my mind many, very many events now long in the records of the past, but never to be forgotten.

I am highly gratified at your present dress and style, and more so with the treat of good things which you have brought to me. I find articles well suited to the practical farmer, actively engaged in his daily duties, short and crisp, just such as he reads in the evening before his last daily meal.

Other articles for the older and graver readers, rich in matter for thought and reflection, and alike encouraging to the young men who are engaged in agriculture.

Then I find matter for the genious of the prospector and inventor in mechanics, all furnishing food for the reading and considerate minds of our Virginia people, men, women and children.

Many thanks to the editor for his kindly memory of old and present consideration for myself. Now, I will tell your readers some things, and give some facts which are sure marks of progress in material prosperity.

There is in this county three distinct ridges of land, which have heretofore been regarded not very eligible for farming purposes, but they can show the finest bodies of pine, oak, hickory and poplar timbers to be found in any eastern region.

Much of this fine timber was left on our streams or bluffs, and other locations which were inaccessible to the ordinary modes of conveyance,

and had no market value. Recently a Pennsylvania gentleman came in from the logging regions of that State, and at once took in the situation, and is now making a good thing of the new industry.

The last freshet took to market some five or six hundred logs on the waters of the Appomattox river, and the new mode of conveyance is so simple and cheap that it is wonderful that it was never thought of or adopted before.

Then we have some eight or ten steam saw-mills running on full time, and morning, noon and night we hear the steam whistle and the never-ending buzz of the saw. Mr. W. E. Gilliam has just erected a large 60-horse power engine, and commenced sawing the lumber to build a commodious house, and will saw, manufacture flour, grind tan-bark and sumac. These are gratifying evidences of improvement in that line.

Some of our good people are engaged in raising fine grade stocks of cattle, and one gentleman (a Marylander) has laid out a sheep-walk, and has stocked it with 650 sheep, some of them finely graded.

Evaporators are being introduced, and enlarged areas are planted in fruit trees, and dried fruit will soon be one of our established industries.

The area in tobacco will be gradually lessened, and a greater variety of products will be raised in its place.

This county is also well adapted to grape culture, and will furnish a fine field for that industry, and Buckingham wine will be well known in market soon.

But we have to fall out of the old ruts, and get well on the modern highway of improvement, and our movements will be rapid and progressive.

These disjointed scraps of information, but facts, I have hastily penned, and you are at perfect liberty to alter, amend, or throw into the waste-basket, which will possibly be the most appropriate place for them. But I am, as ever, your friend,

S.

Buckingham, February 9th, 1885.

TOP-DRESSING.

[For the Southern Planter.]

Mr. Editor,—The subject for discussion at the last meeting of the Tuckahoe Farmers' Club was, "The most profitable use of manure as a top-dressing in winter." The subject was ably discussed by Colonel

Randolph Harrison, and he contended that the top-dressing of wheat in winter was often done, but rarely with profit; that he had tried several times, and it had not proved much of an advantage; and that Prof. McBryde had made many experiments that way, all showing the same results, or very nearly so. Consequently, he argued, that top-dressing on grass was much more profitable, especially on clover; that the quantity of manure could be spread much farther, and a marked improvement would be the result; that timothy would thus be greatly improved, especially on lands not originally rich, and it would retain its hold of the land much longer in this way.

Well, such has been my experience with manures as a top-dressing. I have had lands almost run out in cultivated grasses to come out, and, with the indigenous grasses to help, to make a very good crop of hay, thus lengthening the stand a year longer than I expected.

By using the manure in this way on clover, even when you intend to fallow it for wheat, you are able to cut the first crop as hay, and then have a fair cover to fallow for wheat, and in this way you can go over a larger surface with your manure, and help you more than if applied directly to the soil when the wheat was sown. But our main idea was to utilize the manure in winter as fast as made, so as to get the full benefit before it was leached by rains, and to save important time in the spring, that we might then be plowing instead of having all the manure to haul and spread at that time.

Some have contended that if spread in winter the rain would carry off the juices to the ditches and streams; but this is a mistake, for when it is warm enough for the juices to run from the manure the ground is soft, and will take them in at once, and before they go far.

Before I close there is another idea I want to mention. I have heard all my life that the second crop of clover, if cut and cured for hay, would salivate horses if fed on it. Last August I saved quite a lot of clover hay, and began to feed my cows with it. The horses were in the same stable, and I gave them a little at first; but finding that it did not harm them, I fed them daily for two weeks, and not the first one was salivated in the least. I never dared do such a thing before, but I shall in the future.

When I read your last number I was surprised to see what a few of our Virginia farmers were helping you to keep up a first-class State agricultural paper; so I determined at once to help you all I can, not that I have the ability to do much, but drops make the ocean.

Very truly your friend,

Manchester, Va. F. Guy.

[We thank our friend Guy for his communication, and for the last paragraph in it. We urgently request our subscribers to send us as often as convenient articles embracing their views and experience on subjects of practical agriculture. There can be no better way by which farming can be made interesting and profitable. Farmers owe it to themselves that this method of communication with each other should at all times be active. In connection with the main subject of the article, we add what Dr. Armsby, of the Wisconsin Experimental Station, said. He says: "The loss of manure by leaching through the soil will be very small usually, because all respectably good soils have the power of taking up the valuable matters out of their solution in water and retaining them, ready to feed crops. Only on the lightest lands is there reason to fear any great loss. The only valuable part of the manure which can be converted into gas is its nitrogen, which may escape as ammonia. The extent of this loss has usually been overrated. Stable manure contains but a small proportion of nitrogen, and a still smaller proportion of this is capable of being quickly converted into ammonia and given off as gas. Moreover, the organic matter of stable manure, its humus, has a considerable power of retaining ammonia when it is formed; and, finally, the conditions in the field are not favorable to the formation and escape of ammonia. The manure is too scattered to get up the heat necessary to a vigorous chemical action, and its nitrogen is more likely to be changed to nitrates and dissolved out by rain. Even if ammonia is formed, however, it will not escape into the air unless the manure becomes pretty thoroughly dried out." The great saving of labor which may be accomplished by this method is a strong point in its favor, but careful observation leads us to believe that, aside from this consideration, a greater actual value is realized from the manure when it is thus spread, before it has lost much of its virtue by leaching in the barnyard.—Ed. S. P.]

REGISTERED JERSEYS OWNED NEAR RICHMOND.

Editor Southern Planter,—The *Planter* has lately published descriptions of some of the Jersey herds in the State, and a notice of those owned near Richmond may be of interest to your readers. Mr. S. A. Ellison has nineteen registered Jerseys, mostly imported; Colonel R. Snowden Andrews has fourteen—a part imported; Dr. J. G. Beattie has ten; Mr. John B. Davis has nine; Mr. T. F. Taylor has six, all imported; Mr. C. L. Miller has four; Mr. W. E. Grant has two; Col. Normand Smith has two; Mr. Samuel P. Waddill has one; and there are probably others. All the above are registered, or entitled to registry, and among them are many of as finely-bred Jerseys as there are in the United States, purchased at prices far beyond the means of ordinary farmers. Nothing would show the utter worthlessness of many of the cattle raised in Eastern Virginia than their exhibition side by side with these Jerseys.

The prospect for an exhibition of fine Jerseys at the ensuing State Fair is good.

S.

Henrico county, Va., February, 1885.

ENQUIRY AS TO BEST METHOD OF FEEDING CATTLE.

Editor Southern Planter,—Thousands of cattle are fattened in this county, and yet opinion is very unsettled as to the most profitable method. It is contended by some that ensilage, stall or stable feeding, and partial or total confinement, fattens most rapidly and cheaply, and is altogether the best plan. Others, of extensive experience and excellent judgment, insist that "open" shelters, or the shelter of timber lands, and unrestrained liberty of exercise, is best for both cattle and feeder. And further, that the droppings being distributed by the cattle, saves the cost of hauling. Barnyard manure is saved with equally good results. It is also a mooted point, whether or not *grass* land is materially damaged by the feet of the cattle when the ground is soft, or whether it is not benefited.

One of these systems involves so much less original outlay and expense of labor than the other, that it would be desirable to know that the latter is certainly profitable, and also whether it affords greater or less advantages than the system of stabling. Of course, cattle of much higher quality can be used when stall-feeding is followed.

Perhaps some of your correspondents who have tested the cheaper way will communicate the conclusions they have reached, with such particulars as may definitely support their views.

"Chicago dressed beef" has become so potent a factor in the competition of the West that the dollar will have to be made to go as far as possible in Piedmont Virginia in cattle-feeding. FAUQUIER.

[The subject presented in these inquiries is one we have often thought of and talked of with Piedmont graziers. but we find opinions differ. Not having any personal experience in the matter—having been raised and pursued the business of agriculture in the south-side of the State—we do not feel warranted in offering our own opinions, which are based merely on general principles. We therefore hope that the *Planter* will have responses from those who can speak from experience on the subject. There are many men in Piedmont we could mention by name who can throw light on the question, but it is not proper to individualize.—ED. S. P.]

THE WALLACHIAN SHEEP.

Editor Southern Planter,—I herewith enclose the description of the remarkable breed of sheep to which I called your attention:

"Of the multiform varieties of our domestic rams, the most beautiful is that figured at the head of the present article—it is the Wallachian Sheep (Ovis Aries, Var. Stupsiceros, Linn), and the Cretan Sheep, of Pennant. Though said to be common in Wallachia, Hungary, Aus-

tria, and the western parts of Asia. * * * A few years since a splendid ram which came from Mount Parnassus was presented by Dr. Bowring to the Zoological Gardens. Like its relatives, peculiar to our parts of Europe, it was very stupid, but at the same time vicious and unruly, and of amazing strength. Its horns were very large, spirally contorted (some eighteen inches long), adding greatly to its striking and picturesque appearance. Its wool (if wool it could be called) differed materially in quality and texture from that of our breeds. Instead of being curly and matted, or felted into a mass, it was of great length, perfectly straight, close set, and beautifully fine, falling from the middle of the back, on either side of the animal, almost to the ground. On the face the hair was short and of a rusty black, the same of the legs; on the body it was white. To this description it may be added that the horns of the male mostly rise almost perpendicular from the skull, making a series of spiral turns in their ascent, the first turn being the largest; while in the female they diverge, taking a lateral direction.

"According to Belon, the present variety occurs in Crete." * * *

From the above description, this sheep has peculiar recommendations for our State—namely, from its black face and legs, and fleece of snowy whiteness and great length; that it has been duly reconstructed; and that the fleece has great value from its fineness and length of fiber. The length of their horns, with their spiral twists, together with their amazing strength, show their fitness for the "war-path," and by a judicious adjustment, on the part of the shepherd, of a few dynamite cartridges to their tails they could go forth and graze at will, commanding the respect, at least, of the "yaller dorgs," if not that of our legal members of the Legislature. It must have been this mutton, of which the French tasted, which created their national aphorism, "*Revenous à nos moutons.*"

Let us have this breed imported into Virginia by all means. M.

The food animals consume modifies the character of their flesh. Turnips yield a peculiar flavor to mutton. The flavor of mutton from sheep that have lived upon the highland is different from that of sheep which have obtained their food chiefly from the lowlands. The garlic of the meadows and some fragrant herbs modify the flavor of the meat. Oily food tends to make the fat soft. Hens partly fed on scraps of decaying meat yield eggs that are at once unpleasant to the taste and unhealthy. Feeding animals for human food is, then, of great importance and demands experience. It is not enough that food makes fat—it should also impart an agreeable flavor.

CLUBBING THE PLANTER.

Editor of the Southern Planter,—As a very tardy scholar, I commence this communication, conscious that it ought to have been written long ago. I would not, however, make this apology, but that it is your due. You are engaged in a noble work, stimulating the energies (and frequently the flagging energies), of the cultivators of our mother earth. You, like they, need your hands held up by co-operative sympathy and work, and I feel that my apparent indifference was calculated to exercise a depressing effect, and if my tardiness had not been unavoidable I could not excuse myself, but I think you will as readily excuse me as I do myself, when I tell you that the day I expected to have commenced getting up my club for this year, on November court day, I was confined to the house by sickness, and dare not to venture out. This threw me to December court day before I could see all the parties I wished. Then I could only take the names to see how many I could get, that each might have the advantage of the graduated price, according to the number subscribed. Finding at January court that I was sure for twenty-five, if not thirty subscribers, I commenced collecting, and will remit you the names and amounts of subscribers. I expect to get most of them by Monday, when I will forward this. It is not an easy matter to collect from twenty-five or thirty subscribers in a sparcely settled neighborhood. But I have tried to do my best, and you must be satisfied.

In getting up this club I came across some intelligent gentlemen, who assigned as a reason for not taking the *Planter*, that the writers were not experts, but common farmers, and frequently contradicted each other. That they preferred the consistent, uniform, symmetrical teaching of the accomplished professor of his art, to the fragmentary and contradictory information contained in the espistolary communications which make up so much of the *Planter* matter, which has always appeared to me the great excellence of the work. The plain statement of observed facts, as observed in the field or while practically conducting the operations of the farm with the effort to account for them, or reason from them, is the only way of progress I know, and felt like writing to the publishers of several of the large weeklies and monthlies who have plied me with circulars and sample copies in abundance, soliciting my co-operation, that their system of conducting their papers is too stereotyped for me. I prefer the free interchange of common thought, and if some of us sometimes make some stupid and foolish remarks, they are detected, pointed out and corrected, and we learn

more through making mistakes and correcting them than by gliding smoothly and pleasantly along in the beaten track.

History shows that corruption has crept into systems, through the fact that the advocates, teachers and expounders of them have been of a fixed and stereotyped character, hence the need of reformation, and that never comes till preceded by free and untrammeled discussion. Yes, sir, give me the *Planter's* method in preference to all the ably edited stereotypes in the world.

I am satisfied that the *Planter* is the best paper for the Southern farmer that is published, and the cheapest. S.

Amelia C. H., Va.

[For the Southern Planter.]

HOME ECONOMY AND SMALL INDUSTRIES.

In these times of business depression and scarcity of money, it will be well for farmers to look around and reflect on the best ways of meeting the emergencies of the situation.

Economy of present means is particularly demanded. Those who were so fortunate (?) as to have gone through the war, can realize how much can be done in this direction. Old clothes can be patched up and made to last a year longer. The same can be done with furniture, implements, and especially with non-essentials or luxuries. If many of the wealthiest people lived for four years without new *store-clothes*, with patched and darned carpets, with cracked china, with somewhat battered carriages, and confined their table supplies to home products, to serve the ends of war, why cannot all do something of that kind now? In many respects they would not be worse off from doing so. The sailors in a storm reef the sails and scud before the wind with bare masts till the storm is over. It is wise and safe so to do. So let our people do in their business matters.

I was reading in a Boston journal this morning that the dairy products of this country amounted to $600,000,000, and the surplus supply for sale was mainly raised by some four or five States. While other products are slow sale, these show little or no diminution in price. Such is the demand abroad that all the surplus finds ready sale. Another fact was also brought out, that as hard as times are, nevertheless that eggs are now being imported from Europe to supply the great demand for them in the United States.

I am aware that this line of remark will do a certain class of Virginia farmers no good. This class of people look with contempt on

any suggestion as to making money from any such "*picayune*" business as raising chickens, eggs, butter, &c., and nothing but the cold hand of poverty can bring them to such straits. But the new generation growing up will take the idea more readily. A gentleman of Lynchburg told me his wife supplied his family with milk and sold from a cow bought for $25, over eighty dollars in milk. Good butter will bring in Richmond thirty cents *the year round.* At least I had an offer to pay that from a boarding house keeper, provided the quality be uniformly good. Now what will thirty cents buy? It will buy six yards of calico or cotton cloth, five pounds of sugar, two pounds of coffee, or a proportionate amount of tea. Would a pound of butter have bought anything as much in former years? So that you see there is a "silver lining" to this cloud.

But, Mr. Editor, the farmers of Virginia can never hope to be really prosperous and progressive, so long as they are so reliant on outside people and circumstances. If they must go abroad to buy their axes, hoes, plows, shoes, hats, clothes, furniture, in a word, everything they need in life, and even their coffins when they die, they ought not to complain that hundreds of things they might make or even find without making, on their land, will have to go for a market to the points where these hundreds of articles they yearly buy come from to find a market, and in these distant markets lose half their value from freights and charges. A goose can stand all night on one leg, but people who sell one thing, whether it bring cost or not, and have to buy many things at market rates may certainly count on the balance being on the wrong side at the end of the year.

I never expect to see Virginia prosperous as long as I see cream coming every day, winter and summer, from the North to make ice-cream; or butter from New York; or apples from New England; or hay from Illinois, not only for livery stables in cities, but going out by rail to country depots. A country that, in addition to buying abroad what has been named above, in addition to these would need to have a *Golconda* or an *Ophir* in every county to keep the balance on the right side.

We have many advantages in climate, soil, location; but as Moody said in regard to spiritual talents, we "must use or lose" them.

February, 1885. R.

It is expected that 500,000 sheep will be shipped to England from New Zealand the coming year.

The value of the sheep in Colorado is estimated at $20,000,000.

EGGS.

Success in the poultry yard very much depends upon the ability to get the largest number of eggs in the shortest possible time. A hen can produce about so many eggs, and she may be fed so as to part with them in two years, in producing the same number. Quick work means greater profit, not only in production of eggs, but in the market value of the hen when eggs cease. We must learn the art of feeding so as to realize all that is possible before the hen is two years old, and then send her to the chopping block fat and ready for market.

The production of eggs is a constant drain upon the hen. From one and a half to two ounces of highly concentrated food is secreted through the tissues daily in order that the eggs be formed, and this drain must be met. The hopper will not carry, or the stones grind unless the grain be supplied. Now this quantity of food, necessary to form the eggs, constitutes about one-half of what is taken into the system daily, the remainder going to form flesh and sustain the fowl. This demand for yolk, albumen and shell-forming material, goes on constantly and must be met, so that we may run this egg machine at full blast until the vital forces are exhausted.

Here is the secret underlying all success and anyone who runs may learn. Out of the grains, bones and shells in their variety comes the supply which will meet the demands of nature, and these with proper exercise to sustain vitality are what is needed to keep up the flow of eggs.

A REMINISCENCE OF VIRGINIA.

FROM FARM TALKS OF BEN. PERLEY POORE IN AMERICAN CULTIVATOR.

Tobacco became the staple product of Virginia soon after the first settlement of the British colonists, and although many and stringent laws were enacted to prevent its cultivation, little attention was paid to any other crops beyond what was needed for home consumption. Attempts were made to encourage other branches of rural industry. But the Virginia landowners preferred the exhausting tobacco plants, with a continuous cropping, shallow plowing and no supplies of fertilizers, until every particle of nourishment had been drawn from the soil by the plants or washed out by the rains. The implements used were small plows and heavy hoes, and when the tobacco had been gathered, cured and packed into hogsheads, these were rolled to the nearest inspection wharf. The roads were bad, and there were but few wagons, so a pole and whiffletrees were attached to each hogshead by an iron bolt driven in the centre of each head, and it was converted into a large roller. For many years the places for deposit and inspection of tobacco on the river were called "rolling houses."

King James the First, prompted doubtless by his antipathy to "the Virginia weed," and "having understood that the soil naturally yeldeth store of excellent mulberries," gave instructions to the Earl of Southamption to urge the cultivation of silk in the colony in preference to

tobacco, "which brings with it many disorders and inconveniences." In obedience to the command, the earl wrote an express letter on the subject to the governor and council, in which he desired them to compel the colonists to plant mulberry trees and also vines. Accordingly, "as early as the year 1623, the colonial assembly directed the planting of mulberry trees, and in 1656 another act was passed, in which the culture of silk is described as the most profitable commodity for the country, and a penalty of ten pounds of tobacco is imposed upon every planter who shall fail to plant at least ten mulberry trees for every hundred acres of land in his possession. In the same year a premium of 400 pounds of tobacco was given to a person as an inducement to remain in the country and prosecute the trade in silk; and in the next year a premium of 10,000 pounds of tobacco was offered to any who would export £200 worth of the raw material of silk." About the same time, 5000 pounds of the same article was promised "to any who should produce 1000 pounds of wound silk in one year.

SOMETHING ABOUT "CORNERS."

Our honest farmer friends who have long labored under the impression that all sales are made by actual delivery of the articles sold have much to learn in regard to some transactions to which they are strangers, and which are somewhat outside of the usual business methods.

What is called a "corner" is simply one set of gamblers endeavoring to prevent another body from fulfilling their obligations. In ordinary *business* transactions the creditor is only too happy to give the debtor an opportunity to pay the debts due the creditor, but with "transactions on change" the case is very different, for just what the creditor then desires is that the debtor be utterly unable to pay anything. No goods are handled at all. It is simply a bet between two parties, one betting that he can deliver so many bushels of grain, or gold, or stocks at a fixed time, and the other party betting that he cannot do so.

To make it plain, some speculator goes into the market and offers 10,000 bushels of wheat for sale, which he promises to deliver in one month, or at some future time agreed upon. Now, the speculator has not a single bushel of grain, but he offers it at a certain price, say 90 cents a bushel. He is made to give some kind of security for his fulfilment, such as a deposit of a sufficient sum to pay the difference, should wheat fall in price. Thus if he offers wheat at 90 cents, and deposits 5 cents for a fall on each bushel, should wheat get down to 85 cents he must deposit more, in order to save his first deposit. What he is really trying to do, however, is to sell 10,000 bushels of wheat at 90 cents, to be delivered in one month. At the end of the month, should wheat fall to 85 cents, he does not have to deliver it, but simply walks up and pockets the difference in price—5 cents—and during this time he has not handled an ounce of wheat in any shape.

In the meantime the other gambler goes to work. He does not desire the wheat to be delivered, on paper, at 90 cents. So he goes to

work to get possession of all the wheat he can, making contracts with large numbers to deliver in one month also. By getting the control of these contracts he compels the seller to come to him for the wheat which is supposed to be delivered. As he fixes the price at 95 cents the sellers must pay him 5 cents per bushel or fail to deliver, and after the month has expired and he has "fleeced" the shorts, as the delivery gamblers are styled, the market prices fall to their original figures. Sometimes millions of bushels are thus gambled and the transactions become so large as to place the entire product in the hands of a few, the control of such quantities being known as a "corner."

While the law does not tolerate a game of betting on faro, poker, or other forms of gambling, yet the farmers of this country, who do not gamble, are fleeced indirectly of millions of dollars through the speculators. And yet no one has dared to molest them, as they have become too wealthy and powerful. They are lawful highwaymen, who have the privilege of doing in a wholesale manner that which would consign a retail operator to prison. Until the evil is stopped there will be no end to panics. Business is legitimate, but speculative robbery something else.—*Farm, Field and Stockman.*

SPURGEON AND HUXLEY AS SMOKERS.

Mr. Spurgeon once declared boldly that if anybody could show him in the Bible the command, "Thou shalt not smoke," he was ready to keep it. "I find," he said, in a famous discourse in the Tabernacle —"I find ten commandments, and it's as much as I can do to keep them; I've no desire to make them into eleven or twelve. Why, a man may think it a sin to have his boots blacked. Well then let him give it up and have them whitewashed. I wish to say that I'm not ashamed of anything whatever that I do, and I don't feel that smoking makes me ashamed and therefore I mean to smoke to the glory of God."

For years Prof. Huxley, like Charles Lamb, toiled after tobacco "as some men after virtue." At a certain debate on smoking among the members of the British Association, he told the story of his early strugnles in a way which utterly put the anti-tobacconists to confusion.

"For forty years of my life (he said) tobacco had been a deadly poison to me. (Loud cheers from the anti-tobacconists.) In my youth, as a medical student, I tried to smoke. In vain! at every fresh attempt my insidious foe stretched me prostrate on the floor. (Repeated cheers.) I entered the navy. Again I tried to smoke, and again met with a defeat. I hated tobacco. I could almost have lent my support to any institution that had for its object the putting of tobacco-smokers to death. (Vociferous cheering.) A few years ago I was in Brittany with some friends. We went to an inn. They began to smoke. They looked very happy, and dismal. I thought I would try a cigar. (Murmurs.) I did so. (Great expectations.) I smoked that cigar—it was delicious. (Groans.) From that moment I was a changed man; and I now feel that smoking in moderation is a comfortable and laudable

practice, and is productive of good. (Dismay and confusion of the anti-tobacconists. Roars of laughter from the smokers.) There is no more harm in a pipe than there is in a cup of tea. You may poison yourself by drinking too much green tea, and kill yourself by eating too many beefsteaks. For my own part, I consider that tobacco in moderation is a sweetener and equalizer of the temper." (Total rout of the anti-tobacconists, and complete triumph of the smokers.)

FARMING IN PITTSYLVANIA.

Editor of the Southern Planter,—As I have been taking your valuable *Journal* for some time, and well pleased with it, I will try to give you some idea of my works for the past twenty years. I came home from the army in 1865 and found my wife and two little children with the property I left her with when I entered the service, while many women that were left as she was had gone through with what they had at the commencement. This was some consolation to me, so I accepted the first proposition offered me by which I thought I could make a living. An old gentleman gave me a half interest on a large old plantation. I would not agree to work but four hands the first year. The second year fifteen hands, and have worked as high as thirty since. Have always preferred to pay good wages and get choice hands. I have never had an occasion to go before a justice to settle any business matters. I act myself. Never warranted but one man, that cost me two dollars, and I lost the debt. I was solely dependent on my employers the first four years—only made clear to my part four dollars during that time. I bought a little place of 117 acres; it was called by the name of Point Lookout, another was Starvation Hill. Some of the people remarked that I had moved there to finish perishing—would finish about next year. Thank God, I am on Point Lookout yet, have raised my children to be men and one daughter—five in all. I have added to Point Lookout until I now own about 800 acres here and 117 in another place, and a half interest in 256 acres more at another place, all cleared. My principal work has been on tobacco, though I always try to raise a plenty of everything my land will produce. Never hauled any hay from market. My crops have never been under 13,000 pounds; from that to 50,000 pounds. On all my places my average has been from $9.00 to $30.00 per hundred. Generally make from 300 to 700 bushels of grain, wheat and rye. Your fine harvesting implements that you speak of in your *Journal* would be of no use here; we are obliged to hold on to the old way; our land is so steep and rough that it would be a general smash up to try to use them; but when I read

of their use it almost puts me in the notion to sell all my possessions and buy a little place where I can use machinery, though I reckon I had better be satisfied doing well, let others do better.

I use from eight to twelve tons of fertilizers. A good deal of Allison & Addison's "Star Brand," and two other kinds manufactured in Baltimore—Sea Island, Giant B., and some of the best Peruvian I could get—could see but little difference in any of it. You can see from this whether I worked or not. There has been some done about me in the past twenty years. This is my first scribbling to any newspaper; if you think it worth room in your *Journal*, please assign it a place, not that I doubt any of it myself, but some one would say the old fellow is blowing. PITTSYLVANIA FARMER.

Mount Cross, Va.

THE VALUE OF CLOVER.

To the question of what is gained by plowing in a clover sod? Henry Stewart replies as follows in the New York *Times:*

There are, he says, three advantages—first, the mechanical effects upon the soil; second, the addition of a certain quantity of fertilizing matter; and third, the chemical effects upon the soil.

Just now it is very important to consider each of these very closely, because there is a popular opinion prevalent that the soil is actually improved by cutting and removing this second growth instead of plowing it under. This belief has been taught by agricultural chemists and by writers upon agriculture, and it has been widely adopted on the strength of the authority. But there are really no facts given to support the prevalent belief in the effects of clover upon the soil, while common sense and reason are opposed to it. This will appear as the three points above mentioned are made clear.

First. There are some certain mechanical effects produced upon the soil by the plowing-in of a clover sod, and these effects are greater in proportion to the bulk of the vegetable matter turned under. A quantity of green clover which would make a ton of hay is equal to four tons of the green matter. The roots and stubble of such a growth of clover will amount to an equal bulk of four tons more. Sixteen thousand pounds, or eight tons of green matter, is equivalent to 100 pounds upon every square rod of ground. When this is evenly distributed, as it is by plowing a growing crop under, in alternate layers of vegetable matter, and four, five or six inches of soil, as the furrows may be made, the soil is greatly improved in texture; a light, sandy loam is bound together and consolidated by this fibrous matter intermingled with it, and a heavy clay is loosened, opened, and made more porous. Either soil is far better prepared for its occupation by a mass of roots, and is better enabled to hold the moisture requisite for the growth of a crop.

Second. A quantity of clover like that plowed in contributes to the

soil a large amount of the most valuable fertilizing matter. The eight tons of clover leaves, stems and roots contain about 112 pounds of nitrogen, twenty-six pounds of phosphoric acid, fifteen pounds of sulphuric acid, sixty pounds of carbonic acid, one hundred pounds of lime, sixty-seven pounds of potash, and about sixty pounds of soda, chlorine, magnesia, iron, etc. A ton of ordinary farm-manure contains nine pounds of nitrogen, ten pounds of potash, and four pounds of phosphoric acid. Therefore the eight tons of clover add to the soil as much nitrogen as twelve and one-half tons of manure. There is a considerable balance in favor of the clover, the greater, as nitrogen is the most valuable and costly of all the needed elements of fertility. But there is a deeper view to be taken of this considerable addition made to the fertility of the soil by the clover, and that is, it has been procured from sources where no other crop could procure it, and that is from a great depth, comparatively, in the sub-soil. Clover is a deep-rooted plant. It has a thick, fusiform tap-root, which penetrates to a great depth, and then sends out a multitude of feeders, which gather nutriment from a much larger space and depth of soil than any other plant. Furthermore, it has the habit of passing through its roots and leaves an enormous quantity of water, equal to 15,574 pounds per day for an acre, or in 100 days about 770 tons. This is seven times as much as is required or used by a wheat crop, whose roots occupy much less space and remain near the surface.

There is still another point to be noticed and which we must not omit. This is that while the clover plant draws up and transpires so large a quantity of water, yet the mineral matter held in solution and upon which the plant feeds is by no means proportionately large. It is, therefore, able to exist and grow in poorer soil than any other crop, and to subsist on much weaker food. It is as though an animal could live and thrive and grow upon milk diluted four times with water, and thus exist upon a very poor quality of food; or as though it could increase and grow fat upon straw, eating and digesting four times as much for the same effect as another could do with the best hay and meal. This is the most important point to know and consider, why clover is so beneficial to soils, and why a farmer, by plowing in a clover sod, can grow a good crop of corn and another of oats, and still leave a remainder for the following small grain crop, or why, after a clover sod plowed in, in the summer, he can grow a very much larger crop of wheat than he could in any other way.

These acids are set free and begin to act upon the soil. And we may also in this connection take into account the considerable quantity of the deeper roots of the clover, which are left in the soil to decay below the reach of the plow. The acids act upon the mineral water of the soil and decompose it. The carbonic acid has the property of dissolving in water and conferring upon it the ability to dissolve silica, lime, and other minerals, while sulphuric acid combines with lime and sets free phosphoric acid which may have been in combination with it. Again, the porosity given to the soil by the mass of clover opens it to the admission of the air, and in its decay produces heat, and these in-

fluences greatly accelerate and intensify whatever chemical action may be started by the decay of clover.

In summing up the advantages which may be derived from plowing in a clover-sod—and we may say, at the same time, a crop of clover grown for this purpose—the following are the chief points to be noted:

1. Clover, from its habits of growth, may be produced upon soils too poor for any other crop, because it gathers its food from sources beyond the reach of any other crop.

2. Clover gathers from the soil more potash, lime, phosphoric acid, and other mineral matters, and also several times more nitrogen than any other crop.

3. Clover in its decay sets free from the soil a considerable quantity of mineral matter, and also gathers from the atmosphere, during its growth, a considerable quantity of nitrogen.

4. All these accumulations are brought to the surface, where they are made available for the use of succeeding crops.

5. That in this manner clover affects a sensible and valuable improvement of the soil, both directly by its actual contributions to it, as well as indirectly by its favorable chemical action upon it.

That these contributions of a clover crop to the fertility of the soil are not only in an immediately available form for the use of succeeding crops, but that they are additional to the very considerable, and indeed equally valuable, contribution in the form of fodder for the feeding of stock, which is returned in great part to the soil in the form of manure.

FARMERS' CLUBS.

Editor Southern Planter,—In the January number of the *Southern Planter* I noticed a short piece headed "Farmers' Clubs," in which the writer's views correspond so directly with my own that I have wished ever since reading it to write something on that most important question in connection with farming. The writer most urgently insists upon farmers to organize and to work in co-operation with each other. This question is one that has been urged upon the farmers by some of the most distinguished men of our country; but it seems that they are either dead to their own interests, or blind to understanding.

I can well remember when there were several Granges in my county, though I was quite young, and my father was Master of one for some time. But now there is not an organized club of farmers in the county, to my knowledge. Organization among the farmers cannot be too strongly urged upon them. The farmers of our country are the most oppressed, and more imposed upon than any class of business men in the country. While they should be the most independent, they are most dependent of all our people. I am a farmer myself, though quite

young, and having had but little experience. I think it can be made the most profitable and pleasant occupation we can engage in. I have often taken this view of the position we occupy in connection with the business world. Every other class of business men are organized, and have a stated compensation fixed for their labor, and a certain per centage which they make on the money invested in whatever business they may be engaged in. But the farmer has no regular price which he may expect to get for his produce.

Let us take, for instance, the farmer and the country merchant. The farmer goes to his merchant to purchase some articles which he may need for his family, or some farm implement. "Good morning," says the farmer. "Good morning," says the merchant. "I want some sugar, coffee, clothing, and some plow-points and hoes," says the farmer. "I have them," says the merchant. "What do you ask for them?" says the farmer. "Well, so much per pound for sugar and coffee, so much per yard for cloth, so much a piece for plow-points and hoes." "I have some corn or wheat I want to sell," says the farmer; "what will you give per bushel for it?" "I will give you so much," says the merchant. "Why, that is too little," says the farmer. "Well, that is all I can give," says the merchant. So they trade in this way.

Now, perhaps the farmer may deal with a commission merchant in some town or city. If so, he writes to his commission merchant to send him so much sugar, coffee, molasses, or meat, as the case may be; then he ships his wheat, tobacco, or whatever he may have for market, to his commission merchant, who puts the farmer's produce on the market for sale. Then comes the buyer, or speculator, and says, "I will give you so much per pound for the tobacco, or so much per bushel for the wheat." Let it be little or much, it must be sold. Then the commission merchant writes to the farmer, and sends him a bill of sale, deducting what the farmer owes him, and sends him a check for the balance—if there be any.

Now, this is but a plain statement of simple facts, of every day occurrence with the farmers and those with whom they have to deal.

The point I wish to call attention to is this: that the farmer nowhere in his dealings with the business world exhibits that spirit of independence that nature has lavished upon him. He does not deport himself like his neighbours—the merchant, manufacturer, or machinist, and the many other classes of business men he has to deal with. When he wishes to buy anything for his family, or some farm implement, he does not go to the merchant or manufacturer and say, "I will give you so much for this thing or that," but says to him, "What will you

take for them?" He then pays the merchant's or manufacturer's price for the articles. Now, it is the farmer's time to sell; but he does not do like the merchant or manufacturer—demand his price for his articles—but puts his produce on the market, and takes whatever the speculator is pleased to give, instead of saying, "If you don't give me so much per pound for tobacco, or so much per bushel for my wheat, I will not sell it," but submits to a very small compensation for his labor, puts his hands in his pockets, grumbles a little about hard times and low prices, then goes home, makes another crop, and disposes of it in the same way as the other.

It has been said—and it is true—that the farmers are the bone and sinew of the world. Now, why not, instead of grumbling, assert your rights, and show the world your power by demanding just compensation for your labor?

But how to do this is the question. I will answer it. Organize yourselves and work in co-operation one with another; then petition the government for laws to protect your interests.

I will stop here, as I have written more than I intended; and hoping to hear something from some of my brother farmers on this very important question, I am Yours truly,

Charlotte Co., Va. BEGINNER.

HIGH CULTIVATION.

It pays to raise large crops, and I believe that the farmer who tills his acres well and manures liberally and intelligently, all he tills will be the winner in every contest for a living, and a competency from the farm. While I am perhaps not a farmer in the full sense of the word, I have always taken much interest in the business, and have generally managed to keep up a very respectable show of farming for a diversion from the routine of the duties in my bee-yard. There is no man living, I believe, who is more fully satisfied with his business than I am; yet I think it would be difficult for me to say if I do not as well, like to go over my little farm at morning or evening when I have some time to spare to note the developments of my crops I try to have my farm work done carefully and well, so that I am not ashamed to have men come to see my farm crops or my garden. And it is a real satisfaction to be able to show intelligent visitors something to interest them, so I never let such persons depart without going to see my onion patch, my big cabbages, and a score of other things on my farm.

I took much pleasure in an experiment in high cultivation, last season, with potatoes, on land made rich with superphosphate. It was rather ordinary land, and with ordinary cultivation would not have yielded more than 150 bushels to the acre. I had it plowed and harrowed just before planting, and applied to it broadcast at the rate of

half a ton of the superphosphate to the acre, and mixed it well into the soil with my harrow. The planting was done in hills, three feet by four apart, and one ounce of the fertilizer mixed with the soil in each hill at the time of planting, and one ounce more was strewn around each hill at the second hoeing. There were no weeds allowed to grow, and no "bugs" allowed to live. I had my cultivator run between the rows several times before the plants covered the ground, and had them twice well hoed with hand hoes. At harvesting I had each hill dug out and kept separate on the ground to dry, so that when they were ready to pick up we brought out my scales and weighed a number of the best hills separately, and the whole crop in the baskets as they were taken from the field. One of the best hills yielded 9¾ pounds of smooth, sound potatoes, another 8 pounds of merchantable tubers, and 1½ pounds of small ones. Two hundred and thirty-seven hills gave collectively 1,528 pounds, or an average of about 6½ pounds to the hill, and the whole patch averaged about 6 pounds to the hill, which, although they were planted so far apart—three feet by four feet—yielded at the rate of 363 bushels to the acre. Now if I had sought a large yield to the acre, I should have put the hills somewhat nearer together. At three feet by three feet, I think the average number of pounds per hill would not have been materially changed, in which event the crop would have come up to nearly 500 bushels to the acre.

G. W. P. Jerrard.

Caribou, 1885.

WHY SHEEP ARE PROFITABLE.

Lambs, wool, mutton and manure are the four cardinal points of sheep raising. *Profit* is not in the total amount derived, but the excess after the *cost* is deducted. A flock of sheep may not bring a very large sum and yet be profitable. In this connection we give an extract from the *Sheep Breeder and Wool Grower*, in which the editor alludes to a flock that had been a source of great profit, one of the reasons being as follows:

"It is a fact that the flock did not consume a particle of grain, was carelessly handled and lived on food that would otherwise have been wasted. The owner of this flock assured us that the same treatment would have lost him a good per cent. of his cattle. It is safe to assume that good treatment of this flock would have given the good natured, easy-going master full 100 per cent. profit on his investment."

We can corroborate the above by stating that on our Experimental Farm we have a flock of Oxford Downs that have received no grain since they were born, and yet they are fat enough for the butcher. They were given the liberty of a small pasture, upon which cows and horses had the same privilege, and long after the frost had apparently destroyed every eatable substance, and the larger stock had been removed, the sheep collected and consumed much that otherwise would have been of no value without their aid. They are now at the barn, and have had nothing but cornstalks to pick.

But our readers may think we are neglecting the sheep, and keeping them on a class of food that we do not recommend to others. The truth is, however, the sheep are too fat, and we do not wish them to become more so. Why are they too fat, may be asked. Simply because they are of a breed that easily digests and assimilates all kinds of food, converting it quickly into wool and mutton. While we admit that the native sheep are active and forage well, yet we are satisfied that an Oxford can be fattened quicker and easier than a scrub. The organs of digestion are more perfect, hence the machinery for converting food into flesh works more effectively. We have sheep weighing between 200 and 300 pounds, as fat as hogs, that have never received an ounce of grain, and are being wintered on corn fodder. We, however, watch them closely. Should we discover that the fodder is insufficient we will lose no time in giving them grain or anything else, but in this case the breed counts more than the trough.

But any kind of sheep will prove profitable, because they *save* that which would otherwise be wasted. We do not think every hazard should be staked on *wool*, however, but that our breeders will endeavor to produce *early lambs*, first-class *mutton*, and a fair grade of *wool*. The increased fertility imparted to the soil upon which sheep are kept will almost pay the cost, but as the farmer does not see the *immediate* effects to the soil, he is prone to overlook this fact. But it exists, nevertheless, and can be easily demonstrated.—*Farm, Field and Stockman.*

CULTURE OF WHEAT IN VIRGINIA.

Editor of the Southern Planter,—There was an article in the *Dispatch* of the 11th of February from Col. Harrison, Commissioner of Agriculture, upon the subject of sowing Spring wheat, written in reply to Mr. Jno. W. Todd, of Augusta, asking his opinion as to raising Spring wheat and barley in that county. Col. Harrison's reply is sensible, and should be read by *your* readers.

But the question is, does the wheat crop pay? Does it not cost more than it is worth in *Virginia?*

The unprecedented yield in the last three years of this crop is certainly very encouraging. But when you and I can go back thirty years and remember how we failed to make one-third of the yield which has blessed our farmers in the last three years' crops, I am satisfied that the effort to raise wheat, at least in Eastern Virginia (all east of the Blue Ridge mountains), has done more to impoverish the farmer than anything else; in fact, it has been the chief cause of his ruin. We must consider the vast amount of money paid out every year for fertilizers, hundreds of thousands of dollars for costly machinery, such as drills, reapers, threshers, &c. With all this cost, the actual report

shows only eight bushels per acre as the average yield in Virginia. It is true for the last three years the yield has been larger, but the price has been so reduced that the farmer must realize that the wheat crop has *always* "cost him more than it was worth." It is safe to say, then, that our farmers had better be asleep than to undertake to raise it as a monied crop. Any other crop (or nothing) will be a *safer* one than the wheat business. If half of the labor and expense should be used on any other crop, a better result will follow. There are other and *new* reasons to dishearten the wheat growers in Virginia. The freight on a bushel of wheat or a barrel of flour from any point in the Far West is not more than what is paid by *our* people only one hundred miles from market. It would seem worse than folly for us to contend with our eight-bushel crop against the Western man with his thirty or forty bushels per acre. Again, wheat when sent to market is bought by a very limited number of purchasers—the millers, and *they fix* the price long before it is even ready for market—and other crops or articles sent to market finds hundreds of purchasers and a healthy competition.

With an experience of twenty-five years (from 1852 to 1877), upon a good farm and reputation as a successful farmer, I made but three crops which were not injured more or less by rust; the yield these three years was twenty bushels to one sowed. I found that during the period when the wheat begins to head and as long as the grain is in the milk, or dough state, if we have warm, sultry nights, followed with hot days, the wheat will certainly be injured by rust, and this is surely the case east of the Blue Ridge, at least seven years out of eight years. It is very rare that they have warm nights in the valley as early as the last weeks in May and the first weeks in June, the time of heading and the grain forming, consequently it is rare that their crops suffer from rust, and invariably they make fine crops, and so it is that the valley and west of the Blue Ridge is adapted to wheat, whilst east of it is *not* adapted to it, and will fail seven years in eight to make a crop to pay expenses. What business man would you find in the city of Richmond that would deal in or handle an article that experience teaches him that he will lose money on year after year by the operation. W.

[Our correspondent has a right to express his views on wheat culture, but we differ with *them in toto*, and may find opportunity hereafter to express our own.—Ed. S. P.]

Ten-pound washed fleeces and 125-pound mutton carcasses should be the average for Merino flocks, says the *Sheep Breeder*, and the value of eachs heep should be from $4 to $5 per head.

DAIRY NOTES FROM THE DAIRYMAN.

If there is one problem in dairying that may be considered settled, it is that cows do better on mixed feed than they do on a single ration. For this reason dairymen should study up the question of mixed feeds. There are a great many formulas, more or less practical and scientific. It is an excellent plan, when you see one of these in a paper, to cut it out and paste it in a scrap-book for future reference. For this purpose we give the following: A ration for one cow per day, comprising all the food elements, is thus estimated by a practical dairyman: Ten pounds of clover hay, costing 4 cents; ten pounds of straw, costing 2 cents; four pounds of linseed meal, 6 cents; four pounds of wheat-bran, 3 cents; two pounds cotton-seed meal, 2 cents; four pounds corn-meal, 3 cents—total 21 cents. This estimate is for what may be termed high feeding, and of a variety that fulfils all the requirements of a heavy milker. The prices put with each kind must of course be governed by the location of each dairyman. He will find some higher and some lower in his most convenient market; and if he can make it all work out a total of 21 cents, he should be satisfied. This 21 cents is pretty costly feeding, and cows that yield but 200 pounds of butter a will not pay for such heavy feeding, and cows that are going dry should not be fed it; but if you have cows that will yield 300 pounds of butter a year, this ration will return the best profit for winter feeding.

It is becoming quite the universal belief now-a-days that to gain any distinction in law or medicine the aspirant for fame or money must, as a rule, with very few exceptions, choose some special branch to distinguish himself in. Does not the same rule apply to farming? If you wish to gain high honors or great wealth, are you not far more apt to succeed by choosing some special branch of farming, as stock-raising, truck-farming, or dairying, than you are if you become simply a general farmer? The fact is, that competition is so close and men's knowledge so much wider than formerly, and there is so much to learn about apparently the most important matters, that life is really too short to acquire all that is to be known about any given science. It takes all the time and patience one can muster to master one branch of it. Is it not, therefore, better to devote all our attention to one point than to scatter ourselves over a great many? If this be true, then the young man cannot too soon begin to decide which branch he he proposes to follow, and, having made his decision, he should set to work to study upon the subject—first, by procuring all the good books he can that treat upon it, and then he should look for practical demonstration. If he chooses the dairy, let him again subdivide his choice and determine what branch of the dairy he will follow, and prepare himself accordingly. With a mind thoroughly equipped with all the book-knowledge he can obtain, the practical work, instead of becoming a burden, will be a pleasure, while his own enlightened wits will suggest many short cuts that his ancestors never dreamed of.

A GUARDIAN CROP.

A fortunate characteristic of the clover plant is, its continuous growth throughout the whole season. It is a well established fact, that the exceedingly valuable and soluble compounds of nitrogen are most abundantly formed in the soil during the hot months of midsummer and early autumn. At this time the cereal crops are harvested, with the exception of corn. If the field is bare, there is no doubt that much fertility is lost whenever a rain comes to wash the soil of its richness. On the other hand, clover flourishes at this season, and guards the soil against loss. A large part of the fertility is stored up in the leaves and stems, and goes into the hay-barn, but an equal portion has remained in and on the soil as roots and stubble, and will become plant food for the next crop, through the slow processes of decay. In other words, the clover plant has transformed a large quantity of fertility from a very soluble condition, into a stable state, readily held by the leachy soil. The compounds of nitrogen, potash, and phosphoric acid, that have been removed in the hay, should find their way back to the soil in the barn-yard manure. The long continued experiments at Rothamstead, to which farmers cannot be too frequently referred, show that a clover crop requires three times as much nitrogen for its growth as does a crop of wheat. In the face of this, the same experiments also teach that clover is especially beneficial as a crop to immediately precede one of wheat. In explanation of this apparent contradiction, we need to remember that clover not only husbands the fertility of the soil, but gets it into a place and condition to specially favor the growth of the wheat plant. The field grains have only a few weeks to perfect their growth, and no time to seek after food not close at hand. They do not have the advantage of growing in the midsummer and early autumn, when, through soil-fermentation, the earth has its largest ready supply of plant food. We see good reasons for a firm adherence to the old belief, that clover seed is the best manure that can be applied to a loose soil. Let us grow more clover. Even if it is not four-leaved, it will bring "good luck."—Dr. B. D. Halstead *in American Agriculturist.*

MAKING, SAVING AND APPLYING MANURE.

This was the subject discussed at the last meeting of the West Winthrop Farmers' Club. L. K. Litchfield opened the discussion, and gave his views as follows. He said, in substance, that no more important matter could come under the consideration of any farmer who desired to improve his condition as a farmer, and to increase or even maintain the fertility of his farm. The farmer who does not, at the present time recognize the plain fact, that the extent of his production of farm crops is measured by the amount of fertilizing element applied to his soil, is a long way behind the average of his class. The question of dressing or fertilizing our farm land lies at the very foundation of all success in the business, and we must recognize the fact, and apply

ourselves and the resources at our hand or within our reach, to the best possible advantage. And this requires thought, earnest study and research. Under the present condition of farm lands in our vicinity and indeed, in all the older portions of our good State, every single crop we undertake to grow, whether hay, grain, roots, or fruit, we are compelled to apply some manural substance in some way to the soil, to ensure a remunerative return in product. Now, then, this being so, how important that we become informed in regard to "how to make, save and apply," the manure resulting from the feeding of our farm stock. I am glad the members are not satisfied with the discussion of this subject once in five or ten years, but desire a yearly review of the matter, and thereby note any change that has come through practical experience or from observation and experiment.

Making Manure. It was said by one of our oldest and most experienced members, some years ago, in speaking of the comparative value of bog hay, "That it would not make manure, and it is practically true, so far as quality is concerned; and in considering this matter, we should bear in mind that the manure is proportionally better according as we give better feed to our animals. In maturing any grain crop, whatever is of any value as a fertilizing element, is almost wholly concentrated in the grain itself, thus rendering the stalk or straw which bore the grain of very little value as a manurial substance. So that, if we would make our manure rich in plant food we must feed the grain, or seed of the plants we use for fodder, in connection. If this is done, I claim we get a measure of profit from two sources, besides maintaining the productiveness of our lands. The manures made on different farms vary widely in value, from the fact that some farmers have not accepted the more progressive theory of a combination of grain and hay feed for animals, but continue to feed straw, corn fodder and hay only, through the long season that cattle are housed, while others feed liberally of bran, meal, cotton seed meal and other grain food, in addition to a less amount of hay. In the crops of those farmers may be noticed a very wide difference in favor of those feeding grain. In the making of manure is comprehended the idea of addition to the pile from any available source to increase the quantity, and also to retain the liquid and so far as is possible, the volatile elements of the dressing. Muck, dry clay, earth, leaves, straw, etc., anything having a precentage of value in itself and power to retain the elements, may be used to great advantage.

Saving. In this connection, I will say that I think the best way to save manure, is to apply and thoroughly incorporate it with the soil just as soon after it is made as is possible; but if obliged to keep it any length of time, it should be under shelter, away from the drying winds, the sun, rain and snow. I would apply manure at any time of year when I have it, and could do so without prospect of loss by washing. Every farmer should be the judge of his own particular circumstances, and should inform himself as to the nature of his soil and location, its adaptability to one or the other of the several ways of incorporating manure with the soil; for instance, a disk or Acme harrow would

accomplish the work on a light or medium heavy soil, while the plow would be required on stiff heavy clay, to do as good work. In my practice on my soil, I prefer to spread green manure on furrows in late October, and harrow smooth with "Acme" harrow, and again in spring as soon as in condition.

Leon Cobb followed and said, "This is a big question; its magnitude is not fully realized by the common farmer. Times and methods have so changed in the last forty years that a good many have got left and are now following the same practices as then, and consequently, are not successful. When we apply our manure, we want to do it in that way which will give us the most benefit. We want to know the nature of the soil we desire to fertilize, its power to take and hold plant food, its liability to the influence of the elements, and also the demands which the crop we are intending to raise on that soil, will make of it. I think if manure is plowed under, it will last much longer than if spread on the surface. If on top it will dry up, and is liable to wash away by heavy rains. Roots of plants go long distances in search of food; they go where the best feeding places are. Manure should be plowed in, in the fall of the year."

W. H. Keith said farmers need all the manure they can possibly make, and we should give attention to the quantity as well as to the quality, by the free use of absorbents. I recognize the fact that poor feed makes poor manure, and advocate the feed of grain, in order to make a good quality of manure. It is not wise to apply manure in the hills for any crop. I think all barn manure should be spread evenly on the ground and thoroughly mixed with the soil, and if possible, to use phosphates to give the plants a good send off. I agree that it is quite necessary to know our soils. I think the fall the best time to apply manure; to become plant food, it must be in a soluble state. The rains in fall, the action of frost in winter, and the warm sun of the spring time just prepare it and put it in shape for the plants to take up. Superphosphate is readily soluble in water or moisture, and this accounts for its quick work and the rapid growth when applied. I would apply manure in the fall, on furrows and lightly plow in.

R. Alden says: Many years ago, when this club first started out on its grand mission, I advocated the feeding of grain to farm animals as a source of profit, and a means whereby our farms might be brought into a more productive condition. It was then a new idea, but was accepted by the most of us, and we have been improving our farms ever since, and now, fifty per cent. more stock is kept in this vicinity and on the same farms than before. Feeding of grain makes more and better manure. I spread all manure and harrow or plow in.

Messrs. Samuel Crane & Son of this town are feeding a pair of horses with which they do all the farm work, as follows: Three pounds of chopped hay and two pounds of corn meal, (hay wet with hot water and meal put on it,) in the morning. Two pounds of oat meal at noon and the same ration at night as in the morning, making 6 lbs. hay and 6 lbs. meal per day. They are in fine condition and do lots of work. They are limited to three quarts of water at a time.—*Maine Farmer.*

Winthrop, Jan. 12.

Editorial.

GRASS FOR PASTURE AND FOR HAY.

Every well regulated farm has its grass fields, and every intelligent farmer knows their value. With the Fall and Spring seasons there must be always a recurring thought with all progressive farmers as to the condition of their grass lots and fields. Is it necessary to extend surfaces by sowing new seed, or to top-dress and keep in vigor land already standing in grass? These are questions which should command the attention of the farmers now. If no new seeding is required, then the grass lots and fields should be top-dressed during Winter and early Spring with the best application that can be afforded for them. That which is most handy is wheat-straw, or barn-yard manure; but flour of bone, phosphate of lime and plaster should also be applied if either of them can be afforded. We speak, of course, of grass on land of moderate fertility, for rich land will not require such treatment, except at intervals, and the care of the farmer should be to press fertility forward in the beginning, so as to have a resting spell from labor and expense, with better crops all the time.

The two thoughts embodied in our heading are grass for pasture and hay. In regard to the former we wish to impress the idea that a few acres of lot pasturage contiguous to horse stables and cattle barns, *well fenced*, are the best paying acres a farmer can own. These lots, or *paddocks*, as our English friends call them, are invaluable to every stable and barn yard. They should not be too closely grazed, so that a good sod will be preserved; and they furnish in mild weather a convenient *nip* in Winter, and a field for exercise for all animals, whether they be horses, mules, cows or hogs; and in Summer the working animals can, after being fed, be turned loose for exercise and fresh air.

The field culture of the grasses opens the largest and surest profits to the farmer, and this will continue so long as grass is the basis of food for stock, and grain and meat that for human beings. If a farmer has several fields well set in grass, and others which can come along in rotation, he may safely count himself an independent man. He will then bank upon a capital equally as safe to him as all the millions accumulated in a city bank of discount and deposit.

It is not our purpose in this article to define all the benefits of grass culture, such as saving of labor, the feeding of stock, the improvement of the soil by natural processes of rotation, decay of matter, &c.; but we desire to speak briefly of the grasses best adapted to pasturage and hay.

In the middle section of the United States there are many prominent grasses of great value. Timothy for hay is invaluable, but is a poor grazing grass. It may be raised anywhere in this section on well improved lands, and on the best soils of moderate stiffness and moisture in the most northern portion of the country. It is best to sow timothy seed in the Fall of the year, as early as September or the latter part of August, at the rate of a peck and a half to the acre, with a light sowing of rye or Winter oats, to afford a covering to the young grass during the Winter. In Virginia good *catches* have been had by sowing early in March on wheat fields after a harrowing to furnish a seed-bed, and such seedings shall be accompanied with a gallon of clover seed, which will increase the chances of a stand of one, or both grasses.

Orchard grass is fast growing into popularity, for the reason that it is adapted to any lands and climates where timothy will grow, and on land having less stiffness and moisture. It will flourish, too, better under shade; and whilst it grows in *tufts*, makes a good sod and good grazing at all periods of the year in the Southern-Middle States. It will also make a good hay if cut when in bloom and before the stems harden. The time and manner of seeding is the same as that of timothy, but not less than two bushels of seed should be used to each acre. It is especially desirable that clover should also be sown with this grass, as it fills the gaps between the *tufts*, and can be harvested with it, making a good mixture, which adds to the value of the hay crop.

It is unnecessary to speak of *clover* as a distinct crop, for it is well known as the great ameliorating fallow crop by which fertility is kept up. When it is wanting, other green fallows—peas, &c.—must be resorted to.

There are other grasses which come spontaneously in our clinate on well improved lands, and furnish excellent sod and pasturage. These are, chiefly, white clover and green sward; and like the Kentucky blue grass, they thrive best in natural limestone soils or the well limed lands on tidewater.

In this connection we copy from the *Farm and Fireside*, of Springfield, Ohio, the following article on grasses:

Kentucky Blue Grass.—This variety of grass is indispensable in every good, permanent pasture or fertile limestone soils. For making a first-class lawn on such soils it is unexcelled. It is also known as the Spear grass of Pennsylvania, as June grass in New York, also as English grass, Smooth-stalked, Meadow grass, Tallow grass and Butter grass. The names last given are doubtless due to the fattening and butter-producing qualities of the true *poa pratensis*. For dairy and stock-raising purposes it is unsurpassed. It gives a fine coloring and

rich taste to butter and cheese, and the mutton of the Blue grass region of Kentucky and neighboring States always commands the highest price in the best-paying markets in the East. The pressure of the hoof of the sheep seems to be just the thing for the Blue grass, and the even distribution of the manure of the sheep makes the grass unobjectionable to other stock, and is a constant benefit to the plants. For Winter pasturage for sheep, Blue grass is unrivalled. It is much superior to Orchard grass for forming a sod, but the latter makes a very fair sod if thickly sown, and possesses the advantage of being better adapted to the soil of high uplands, where the Blue grass cannot be so successfully grown. Where white clover is native to the soil, and Blue grass, Orchard grass and a little red clover are sown, the latter will soon disappear and the Stalwart Orchard grass and its peer, the Blue grass, will, with the incoming white clover, produce a pleasing variety.

English Blue Grass.—This exceedingly valuable grass on lands that are adapted to the Kentucky Blue grass, as well as upon those somewhat more moist, such as black prairies and river bottoms. A well-known writer on agricultural topics, who has had more than twenty years' experience with it in Southern Ohio, says: "In the English Blue grass we have a grass which combines, to a greater extent than any other plant in common cultivation, the desirable qualities of timothy for hay and the Kentucky Blue grass for pasture; furnishing, as it does, an early pasturage, or an abundant early mowing, followed by a most luxurious aftermath, which springs up immediately behind the scythe, and continues fresh and vigorous through the drouths of August and until all vegetation is browned by the frost."

Advantage of Mixing Grasses.—The greater the variety of the choicest grasses the better for the thrift of the cattle and other stock that feeds upon it. In pastures especially, "variety is the spice of life." When seeding with the well-tested sorts, sow several others that will not run out the "old reliable" varieties. For instance, if there is a probability that white clover will be lacking when the sod is established, sow about five pounds to the acre. Sow also, upon each acre seeded, one or two pounds of Sweet-scented Vernal grass (*anthoxanthum odoratum*), which is also one of the earliest Spring grasses, as well as one of the latest in Autumn. This variety is distinguished for its fine perfume while drying, which it communicates to the hay with which it is mixed. Other varieties have special merits which should be ascertained and utilized. Another advantage in mixing grasses is that an early variety shades the tender blades of a later one, and it in turn shades the exposed roots of the one that has passed the vigorous period of its growth, and when the more hardy varieties are at last nipped by frost, they, too, spread their protecting blades over those that are most valuable in mid-Summer, to shield them from the storms of the coming Winter.

W. M. K.

An Indiana farmer states that he cured heaves in horses by withholding hay from them and substituting green food in its place.

A PEA-FALLOW ON POOR LAND.

Editor Southern Planter:

Dear Sir,—I would like to get such information as to what would be the best and cheapest way to get a good growth of peas (black) on poor land for the present year.

By giving me the above information, you, or any of your subscribers, will greatly oblige, Very respectfully,

Old Church, Hanover Co., Va. C. L. T.

It would seem like "bringing coals to Newcastle" to undertake to tell a farmer near *Old Church*, Hanover, how to manage a pea-fallow. The most distinguished agriculturist of Virginia, the late Edmond Ruffin, Sr., farmed on his Marlburne estate, near *Old Church*, and was the first farmer of the State to advocate by his writings, and to test by practical experiments, the value of pea-fallows in the tide-water section. His grandsons, now living on the same estate, are familiar with his views, and we call on Mr. Julian M. Ruffin to respond. It may be that the *Marlburne* lands are not poor, and therefore do not come within the letter of our correspondent's inquiry. We who have been more used to poor lands, and to efforts to improve them, may then be pardoned for writing in advance of our friend Ruffin.

Poor land will not bring a growth of peas of much value. It must be fertilized in some way which will give a growth of vines and peas, which will add to the fertility of the soil when turned under. Our plan would be this: Break the land in early spring, and let it lie for the early grass seeds to vegetate; harrow it as often as may be necessary to keep down any growth of grass or weeds; at the first harrowing apply two or three hundred pounds of bone dust, or any other phosphatic manure; and from the middle to the last of May harrow in a bushel of peas to the acre, with about one hundred pounds of an amoniated fertilizer to give a quick start. The peas will be ready to be turned in when about half the pods are matured, and a sufficient quantity picked for seed for the following year. Wheat or winter oats should follow the in-turning of the pea-crop, and at the same time should be added and applied broadcast a mixture of phosphate of lime and kainit, in the proportion of *two* to *one*, amounting to three or four hundred pounds to the acre of this or any other good phosphate manure. After the grain and fertilizers have been harrowed in, and when the land is fresh, clover or other grass-seeds should be sown.

If the farmer is not disposed to apply manures as heavily as suggested, he must be content to take two years or more for the operation

of improvement. Apply the first year one-half of the fertilizing material to the peas, and after fallowing in the first crop sow a bushel of rye to the acre, and in the month of May following turn this crop under, and then sow another crop of peas. This to be followed in the fall with an application of good phosphatic manure, and the seeding of wheat or winter-oats, and grass-seed as before stated; and we would advise orchard-grass and clover mixed—two bushels of the former and a gallon of the latter—to each acre.

All farmers on tide-water who can get shell or stone lime delivered at convenient wharves should use it, or the marl which abound in that section; but it will not at first substitute the fallows and fertilization mentioned, but will keep up a permanent fertility afterwards.

A BREEDER of Shropshire Downs claims the following advantages in their favor: They are the best adapted of the fine grades to herding in large flocks; they are hardy, and endure cold winters with much less nursing than some other breeds; they are good feeders and foragers; they have extra good fleeces; they are very prolific breeders; they are unsurpassed for mutton. The crosses of the Shropshire on common ewes are said to make the best lambs of any grades.

IT IS a great fault with many farmers to allow their cattle the range of the farm, thus getting more exercise than is good for a milch cow, trampling the field and making muddy paths, while the frost-bitten food that they pick up is of reduced benefit, and leaves the fields bare and exposed to the winter's severity. It is an error to suppose that late grass, frost-bitten and bleached, is of more value as food than for plant-food and protection. Leaving the grass unfed is, in effect, green manuring without the expense of turning it under.

THE result of grain-farming and stock-farming, says the *Canadian Breeder*, may be summed up as follows: The grain-farmer spends all his energies in getting all he can out of the land during the short period intervening between the beginning of spring work and the end of harvest; or perhaps he may have a few acres of wheat, which he sows in the fall, and, after sprouting, waits till the advent of spring to renew its growth; while the stock-breeder has his work at his hand the whole year round, but his herd manures the land, reaps the crop, and caries it to market.

THERE is no way to prevent bots in horses but by removing the nits from the hide whenever deposited thereon.

The Southern Planter.

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EDITORIAL NOTES

THE FARMERS' CONVENTION.

(To Meet in this City on the 15th April Next.)

In our January issue we called attention to the proposed assemblage of the farmers of the State. It is well to remind our readers of the plan for getting up this convention. One delegate at large is commissioned by the President of the *State Agricultural Society* in each county, with the duty of calling meetings of farmers of their respective counties for the election of two representatives from each magisterial district to the convention. We learn from the Secretary of the Society that the commissions for delegates at large for the counties have been issued, and many favorable responses have been received. It, therefore, remains with the farmers in their district meetings to fill up the list of delegates. From the interest and activity displayed in many of the counties it is already assured that the convention will be a large and influential one. But it is very important that every section of the State should be well represented, so that if any of the proceedings demand future legislative action to confirm and establish them, the fulness and representative character of the convention may be such as will have sufficient weight and authority to direct and control the votes of the members of the Senate and House of Delegates. These remarks are made especially with reference to the southwestern and distant counties to induce them to consider the important results that may be obtained by means of the convention, and to urge them not to permit the inconveniences of location to prevent their being fully represented. We would also suggest that the county meetings prepare, or have their delegates prepare, proper subjects of importance to their interests, to be submitted properly to the convention, which will prevent confusion and allow due consideration of such matters, instead of taking the time of the meeting in the discussion of undigested and unnecessary resolutions.

Farmers should assert themselves in every legitimate way to advance their interests. All trade occupations have their organizations, and why not the farmers? Farming is at the foundation of every business, for it feeds all; and why should it be subject to tradesmen, manufacturers, and all others who are fed by its products?

The proposed State Convention may be regarded as a combination, and it is all the more important in that respect. We take from the *Lynchburg Advance* the following words, called forth by the meeting of the Farmers' Congress at the New Orleans Exposition, which are pertinent to our subject:

"There is not only no reason why farmers should not combine for their own interests, but every reason that they should. They directly pay toll to all manufactories, and these combine and secure legislation that benefits them, *vide* all the tariff bills. They pay toll to patent rights. Look at the barbed wire, sewing machines, &c. Look at the royalties. The farmer pays these, and legislation makes him pay, and legislation is secured by united and com-

bined action. So of railroads, these combine, and the farmer pays transportation. So of everything that the farmer and planter uses, and so in his tobacco and fruit, he pays a direct tax, and all these benefits to other interests as well as burdens on agriculture are secured, one way or another, by the organized action of those interested. The farmer has had but little opportunity for such combinations. The Grangers, it was asserted, would do this work, but somehow or other it got to be an office-holding body in many respects, and the real farmers gave it up. Now, we have always welcomed these organized moves of the agriculturists, because the agriculture of this country is its real foundation, its real, reliable basis. We hope the New Orleans Exposition may greatly aid them.

VIRGINIA NORMAL SCHOOL AT FARMVILLE.

We have, since November last, published in each issue an essay on "Self-Supporting Employment for Ladies of the South." This is sufficient evidence of our interest in the subject of female education and the employment which should follow it.

We must here note that the *Normal School* at Farmville is a new institution, under the presidency of Dr. W. H. Ruffner, the leading public-educator of the State, and we have seen from several of our exchanges that the school is in a prosperous condition.

This is its organization: Hon. W. H. Ruffner, Principal; Miss Celeste E. Bush, Vice-Principal; Miss M. Pauline Gash, Miss Lillian A. Lee, Miss Carrie T. Bartkowsky, Assistant Teachers; Hon. J. L. M. Curry, President; F. W. Watkins, Secretary and Treasurer.

We add the words of Dr. Ruffner in the late School Conference in this city: "Develop the women, they will develop the people, and the people will develop the *State.*"

VIRGINIA AT NEW ORLEANS.—The following is from the New Orleans *Times-Democrat* of the 11th instant: It is a pleasure to invite the attention of the public to the Virginia exhibit in the Government Department of the Exposition, to which vast crowds of visitors are daily thronging. A ramble through the labyrinthine aisles of the products and manufactures of this grand old mother of States cannot fail to impress one with the vastness and richness of her resources.

The competency and courtesy of the commissioner, his untiring patience and energy in attention to visitors to the Exposition, reflect great credit on those who have selected their representative for this grand occasion in the person of Colonel Finney.

A NEW USE FOR SAFE DEPOSIT VAULTS. One of our well known New York seed firms has now on deposit in the Mercantile Safe Deposit Company's vaults four hundred pounds of Henderson's Snowball Cauliflower Seed, which at the selling price of one hundred dollars per pound shows the value of this seed to be forty thousand dollars. Not only is this plan of depositing in vaults found to be cheaper than insurance, but what is of more importance is that if the seed should be destroyed by fire this quantity necessary for their trade could not be replaced at any price in time for their Spring sales. When it is considered that four hundred pounds of Cauliflower seed will under favorable conditions produce nearly thirteen million plants, which when headed for market and sold at even eight cents per head will produce the sum of three quarter of a million dollars, the value this vegetable has attained in this country, where twenty-five years ago it was almost unknown, becomes readily apparent.

HARPER'S MAGAZINE FOR MARCH.—In connection with the approaching inangura tion of President Cleveland, two papers promised for the March *Harper's* will have especial interest. One of the treasures of the library of Mr. Tilden is a good-sized book, bound in calf, filled up in the handwriting of Thomas Jefferson. It is the financial diary of the great man, kept hy him from January 1, 1791, while he was Secretary of State, up to 1803, covering thns the first two years of his Presidency. Among its entries is a carefnl summary of all his expenses from March 1, 1801, to March 1, 1802, showing an expenditure of $32,634.84, the varions elements of which are given in detail. Jefferson had as great a dislike of presents as Mr. Cleveland, and even insisted upon paying the dnty on certain wine procnred from the Spanish minister, who had imported it dnty free for his own nse. He also paid sixteen cents a pound for a monster cheese, evidently sent to him as a present. There is also "In an Old Virginia Town," by Fred. Daniel, a Virginian, with six illustrations by one of Richmond's best artists—Shepard.

IN *Balyhood* for February "The Baby's Bath," with all that pertains to it, by Marion Harland, makes one of the most interesting and practical snbjects yet tonched upon by this magazine. Snbscription price $1.50 per year, or $2.20 with the *Planter*. 18 Sprnce street, New York.

NORTH AMERICAN REVIEW for March, cnrrent, contains interesting and instructive articles contrihnted by national writers. We mention one by our ex-Senator, J. W. Johnston, on "Railway Land-Grants." New York, 30 Lafayette Place, is the address of the pnblishers.

A BOOK ABOUT POULTRY—Containing 100 pages, fine illnstrations of all the different breeds, plans for honses, instructions for caponizing, directions for doctoring, how to manage incubators, etc., and having a beantiful colored lithographic frontispiece of a gronp of land and water fowls—has heen received by us fiom the Associated Fanciers, 237 Sonth Eighth St., Philadelphia. They will mail it to any address on receipt of 15 cents, and it is well worth 50 cents.

COMPLIMENTARY NOTICE.—Of all the pnblications of nurserymen, there is no other that can be compared with *Lovett's Guide to Fruit Culture*. It is really a valuable work on Horticulture, giving, as it does, full instructions for planting, pruning, culture and management of fruits of all kinds, and impartial descriptions of all worthy varieties. It is a hook of over 70 pages. with an illuminated cover, elegantly printed and embellished with hundreds of engravings and several colored plates true to nature. Everyhody at all interested in fruit culture should send to J. T. Lovett, Little Silver, New Jersey, and get a copy. See advertisement in this nnmher.

THE FARMERS' CONGRESS.—The Farmers' Congress at New Orleans Saturday adjourned *sine die*. A resolution endorsing in the highest terms Col. Robert Beverly, of Virginia, for appointment as Commissioner of Agriculture, if the hill creating that office shall he passed by Congress, was adopted.

BOOKS AND MAGAZINES.

The publishers, D. Appleton & Co., of New York, have sent us a hook entitled "Origin of Cultivated Plants," by *Alphonse De Candole*. It is a philosophic treatise, which will interest every inquiring mind.

"Prairie Experience in Handling Cattle and Sheep," hy Maj. W. Shepherd, R. E. Illustrated, pp. 215. Orange Judd Co., New York. This is a valuable hook to all ranchmen and those who handle large herds.

"Practical Poultry Book, for both the Farmer and the Fancier." Pp. 100. Pnblished hy the Associated Fanciers, 237 south Eighth street, Philadelphia. Well illustrated, and interesting to persons engaged, or proposing to engage, in the poultry husiness.

"The Peanut Plant, its Cultivation and its Uses." by B. W. Jones, of Virginia. Illustrated. Orange Judd Co., New York, publishers. Pp. 69. No man can hetter write of practical peanut culture than Mr. Jones, who lives in the middle of the peanut section of Virginia.

"Proceedings of the First National Convention of Cattlemen, and of the First Annual Meeting of the National Cattle and Horse Growers' Association in the United States, held at St. Louis, Mo., November

17th to 20th, 1884." Pp. 126. This seems to be a valuable book to cattle and horse men.

"The Tobacco Remedy," by Gen'l T. L. Clingman, of North Carolina. Pp. 46. Published by the Orange Judd Co., 751 Broadway, New York. It tells of many complaints which can be relieved by the use of tobacco.

The *Century Magazine* for March, current. has been received; also *St. Nicholas;* and both filled, as usual, with beautiful illustrations and good reading. Both published by the Century Company, N. Y.

REPORTS, &c.

Department of Agriculture (U. S.): Special report of the organization, &c., of seven Agricultural Schools in Germany, Belgium, and England, madè to Commissioner Loring.

Report on the numbers and value of farm animals iu the United States; the cotton-crop, and its distribution; freight rates, &c.

Annual Report of the Connecticut Agricultural Experiment Station for 1884.

The State of Georgia: The Country, the People, the Productions. Part 1, outline view, by Hon. J. T. Henderson, Commissioner of Agriculture.

Report of Soil-Test of Fertilizers under direction of the Commissioner of Agriculture of the State of Georgia. &c.

Report of the Tennessee Weather Service, by the Bureau of Agriculture, Hon. A. J. McWhirter, Director.

CATALOGUES.

Colonel T. J. Boyd's list of Coal, Iron, and other mineral and timber lands in Wythe and Bland counties, Va.

John Saul, Washington, D. C., sends us his Catalogue of Plants for '85; also his catalogue of garden and flower seeds; and also a descriptive catalogue of a selection of roses for '85.

Gregory's Annual Illustrated Catalogue of Warranted Seeds—vegetable, flower, and grain—grown by James J. H. Gregory, Marblehead, Mass.

Peter Henderson & Co.'s Manual of everything for the garden, handsomely illustrated, 35 and 37 Courtlandt street, New York.

Ellwanger & Barry s Descriptive Catalogue of Fruits, Mt. Hope Nursery, Rochester, N. Y.

Cayuga Lake Nurseries, H. S. Anderson, Union Springs, N. Y.

Samuel Wilson, garden, field and flower seeds, Mechanicsville, Pa.

Landreth's—1774 to 1885—Rural Register and Almanac. A good book.

J. B. Moore & Son, new seedling grapes and new asparagus, Concord, Mass.

Bowdich's (illustrated), garden, flower, and agricultural seeds, &c., Boston, Mass.

Edward Gillett (annual), perennial plants, orchids, alpine shrubs, climbing, aquatic and bog plants, Southwick, Mass.

W. A. Smith, for 1885, 1018 Market street, Philadelphia.

Shaker Seed Co , Mt. Lebanon, N. Y.

Frank Ford & Son, small fruit plants, vegetable seeds, &c., Sunnyside, Ravena, O.

J. T. Tillinghast, reliable seeds at honest prices, La Plume, Pa.

Joseph Harriss (illustrated), vegetable and flower seeds, Rochester, N. Y

Bryant's Nurseries, Princeton, Ill.

A. D. Cowan & Co., seedsmen, New York.

J. B. Gray (annual), Fredericksburg, Va.

NEW ADVERTISEMENTS.

Electric Manufacturing Co. Alden & Bro. See advertisement.

W. H. Fay & Co., Camden, N. J., Manilla Roofing. Ayer & Son.

Peter Henderson & Co. New York, Seed Catalogue. Rowell & Co.

Wells, Richardson & Co., Burlington, Vt., New Improved Butter Color. H. P. Hubbard.

Rev. T. P. Childs, Troy, Ohio, Catarrh Cure. Alden & Bro.

Call Publishing Co., Chicago, Cyclopedia. Universal reference.

Continuauce of advertisement of G. B. Lynes, Albemarle Co., Va.

Lamborne Road Machine Co., Media, Pa. No community can afford to be without good road machines.

Rumsey Bros., Westfield, N. Y., Cattle and Swine. Alden & Bro.

A Safeguard.

The fatal rapidity with which slight **Colds** and **Coughs** frequently develop into the gravest maladies of the throat and lungs, is a consideration which should impel every prudent person to keep at hand, as a household remedy, a bottle of AYER'S CHERRY PECTORAL.

Nothing else gives such immediate relief and works so sure a cure in all affections of this class. That eminent physician, Prof. F. Sweetzer, of the Maine Medical School, Brunswick, Me., says:—

"Medical science has produced no other anodyne expectorant so good as AYER'S CHERRY PECTORAL. It is invaluable for diseases of the throat and lungs."

The same opinion is expressed by the well-known Dr. L. J. Addison, of Chicago, Ill., who says:—

"I have never found, in thirty-five years of continuous study and practice of medicine, any preparation of so great value as AYER'S CHERRY PECTORAL, for treatment of diseases of the throat and lungs. It not only breaks up colds and cures severe coughs, but is more effective than anything else in relieving even the most serious **bronchial and pulmonary affections.**"

AYER'S
Cherry Pectoral

Is not a new claimant for popular confidence, hut a medicine which is to-day saving the lives of the third generation who have come into heing since it was first offered to the public.

There is not a household in which this invaluahle remedy has once been introduced where its use has ever been abandoned, and there is not a person who has ever given it a proper trial for any throat or lung disease susceptible of cure, who has not been made well hy it.

AYER'S CHERRY PECTORAL has, in numherless instances, cured obstinate cases of chronic **Bronchitis, Larnygitis,** and even acute **Pneumonia,** and has saved many patients in the earlier stages of **Pulmonary Consumption.** It is a medicine that only requires to be taken in small doses, is pleasant to the taste, and is needed in every house where there are children, as there is nothing so good as AYER'S CHERRY PECTORAL for treatment of **Croup** and **Whooping Cough.**

These are all plain facts, which can be verified by anybody, and should be remembered by everybody.

Ayer's Cherry Pectoral

PREPARED BY

Dr. J. C. Ayer & Co., Lowell, Mass

Sold by all druggists.

KING'S EVIL

Was the name formerly given to Scrofula because of a superstition that it could he cured by a king's touch. The world is wiser now, and knows that

SCROFULA

can only be cured hy a thorough purification of the hlood. If this is neglected, the disease perpetuates its taint through generation after generation. Among its earlier symptomatic developments are **Eczema, Cutaneous Eruptions, Tumors, Boils, Carbuncles, Erysipelas, Purulent Ulcers, Nervous and Physical Collapse,** etc. If allowed to continue, **Rheumatism, Scrofulous Catarrh, Kidney** and **Liver Diseases, Tubercular Consumption,** and various other dangerous or fatal maladies, are produced by it.

Ayer's Sarsaparilla

Is the only powerful and always reliable blood-purifying medicine. It is so effectual an alterative that it eradicates from the system **Hereditary Scrofula,** and the kindred poisons of contagious diseases and mercury. At the same time it enriches and vitalizes the hlood, restoring healthful action to the vital organs and rejuvenating the entire system. This great

Regenerative Medicine

Is composed of the genuine *Honduras Sarsaparilla,* with *Yellow Dock, Stillingia,* the *Iodides of Potassium* and *Iron,* and other ingredients of great potency, carefully and scientifically compounded. Its formula is generally known to the medical profession, and the best physicians constantly prescribe AYER'S SARSAPARILLA as an

Absolute Cure

For all diseases caused by the vitiation of the blood. It is concentrated to the highest practicable degree, far beyond any other preparation for which like effects are claimed, and is therefore the cheapest, as well as the best blood purifying medicine, in the world.

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Sold by all Druggists: price $1; six bottles for $5.

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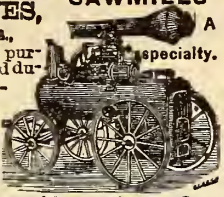
STEAM ENGINES,

A. B. FARQUHAR, York, Pa.,

Cheapest and best for all purposes—simple, strong, and durable. Also Horse Powers and Gin Gear.



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SAW, GRIST AND COB MILLS, GINS, PRESSES AND MACHINERY generally. Inquiries promptly answered.

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Vertical Engines, with or without wheels, very convenient, economical and complete in every detail, best and cheapest Vertical in the world. Fig. 1 is engine in use. Fig. 2 ready for road.

Fig. 2.

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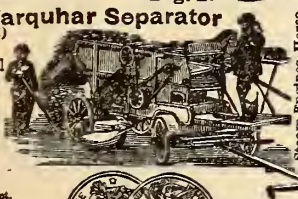
The Farquhar Separator

(Warranted)



Penna. Agricultural Works, York, Pa. Lightest draft, most durable, simplest, most economical and perfect in use. A glance will convince it

Steam Engines, Horse Power and Threshers of all kinds. Also, Ploughs, Cultivators, &c., &c.

AND HIGHEST PRIZE AWARDED SEPARATORS,

THE SILVER MEDAL AT Paris Exposition.

Send for Illustrated Catalogue. *Address A. B. Farquhar, York, Pa.*

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LABEL

Dana's White Metallic Ear Marking Label, stamped to order with name, or name and address and numbers. It is reliable, cheap and convenient. Sells at sight and gives perfect satisfaction. Illustrated Price-List and samples free. Agents wanted.

C. H. DANA, West Lebanon, N. H.

Orderthrough the *Southern Planter.*

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Are unequalled in EXACTING SERVICE.

Used by the Chief Mechanician of the U. S. Coast Survey; by the Admiral commanding in the U. S. Naval Observatory, for Astronomical work; and by Locomotive Engineers, Conductors and Railwaymen. They are recognized as

THE BEST for all uses in which close time and durability are requisites. Sold in principal cities and towns by the COMPANY'S exclusive Agents (leading jewelers,) who give a Full Warranty.

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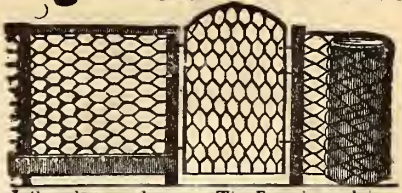
Sedgwick Steel Wire Fence



Is the only general purpose Wire Fence in use, being a **Strong Net-Work Without Barbs.** It will turn dogs, pigs, sheep, and poultry, as well as the most vicious stock, without injury to either fence or stock. It is just the fence for farms, gardens, stock ranges and railroads, and very neat for lawns, parks, school lots and cemeteries. Covered with rust-proof paint (or galvanized) it will last a life-time. **It is Superior to Boards or Barbed Wire** in every respect. **We ask** for it a fair trial, knowing it will wear itself into favor. The **Sedgwick Gates,** made of wrought-iron pipe and steel wire, defy all competition in neatness, strength and durability. We also make the best and cheapest **All Iron Automatic or Self-Opening Gate,** also **Cheapest and Neatest All Iron Fence. Best Wire Stretcher and Post Auger. Also manufacture Russell's excellent Wind Engines for pumping water,** or geared engines for grinding and other light work. For prices and particulars ask hardware dealers, or address, mentioning paper.

SEDGWICK BROS. Mf'rs., Richmond Ind.

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THE BEST CATTLE FASTENING.

Smith's Self-Adjusting Swing Stanchion.

The only practical Swing Stanchion invented. Thousands in use. Illustrated circular free. Manufactured by BROOKS & PARSONS, Addison, Steuben Co., N. Y. ASHTON STARKE, Richmond, Va., Ag't.

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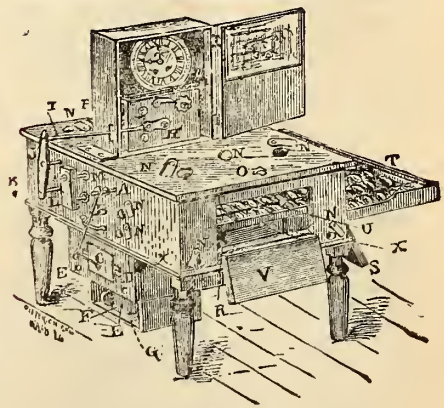

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Dr. GEORGE B. STEEL,

DENTIST,

723 Main Street, Richmond, Va.

CHAS. L. STEEL, M. D., D. D. S., Assistant

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The oldest Agricultural Journal in Maryland, and for ten years the only one.

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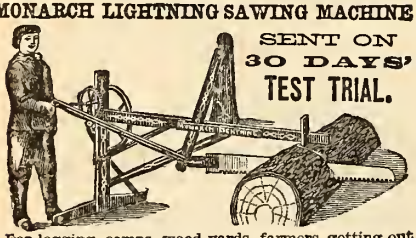
MONARCH LIGHTNING SAWING MACHINE



For logging camps, wood-yards, farmers getting out stove wood, and all sorts of log-cutting—**it is unrivaled.** *Thousands sold yearly.* A boy of 16 can saw logs **fast** and **easy.** Immense saving of **labor** and **money.** Write for elegantly illustrated catalogue in 6 brilliant colors, also brilliantly illuminated poster in 5 colors. **All free.** Agents Wanted. *Big money made quickly.*
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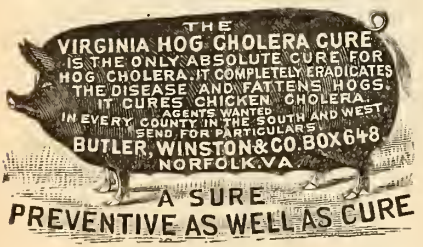

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All kinds of Seeds and Plants
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Catalogues mailed free on application.
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FINE DRESS SHIRTS a specialty.

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Please Mention this Paper.) Chambersburg, Pa.

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Famiiies having a surplus of anything produced in the Dairy, Barnyard or Garden, will do well to advise with me. Correspondence solicited. ja 1y

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THOROUGHBRED HORSES

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PURE COTSWOLD SHEEP

And BERKSHIRE PIGS.

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SEED CORN!

I have an excellent corn which I will sell for seed. This corn is very prolific, and weighs when well matured sixty pounds to the struck bushel. Brings on the market two and three cents more than any other corn. This corn is suitable for bottom lands and heavy clay soils—a hard, white flint corn, standing more water than any corn known. I have oft times had it flooded with but little or no damage. I never average less than fifty bushels to the acre, and this amount on land running in corn from seven to thirty years. In 1881 I measured 105 bushels shelled corn from one selected acre. I can supply any person wanting good Seed Corn for bottom lands or table lands, or more elevated heavy clay soils, at $1 per bushel, delivered on the cars at Bremo, if bags are furnished free by purchaser, or will ship through Messrs. Simpson, Bass & Co. or Messrs. Sublett, Cary & Co., of Richmond, Va., I furnishing bags, at $1.15 per bushel.

fe tf **B. H. BRAGG, Bremo Bluff, Fluvanna Co., Va.**

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UPPER JAMES RIVER VALLEY.

All things considered, the advantages of this section cannot be well over-estimated. The advantages are, viz.: Health and salubrity of climate, good and productive soil, abundant supply of pure water, excellent timber, an inexhaustible supply of the staple minerals (coal and iron), accessible to the best markets with rapid transit. These lands are now cheap, yet must rapidly increase in value, and make sure and speedy fortunes to those who secure them at present prices. Send stamp for pamphlet, giving full particulars. Address,

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Maiden's, Goochland Co., Va.

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BY USING THE

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WIND ENGINE.

Carrying Wind Mills on hand at **Boston, New York City, Rochester, N. Y., Philadelphia, Pa.**, and many other points, operating our experienced men to plan and execute work from these points, enables us to do superior work promptly, thus insuring satisfaction to the buyer. We contract to force water from wells or springs to any point for Farmers, Dairymen, Gardeners, Florists. Villages, Private Residences, &c. We can refer you to parties using. Write for our Catalogue and Power Engines, Pumps, Tanks, &c., giving us an idea of the kind of work you want done. Address all communications to **B. S. WILLIAMS & CO., Kalamazoo, Mich.**

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DAIRYMEN and FARMERS should use only the "Arm and Hammer" brand for Cleaning and Keeping Milk Pans Sweet and Clean. It is the Best for all Household Purposes.

HOG DISEASES.—The "Arm and Hammer" brand Soda and Saleratus is used with great success for the prevention and cure of HOG CHOLERA and other diseases. Mix with the animal's food.

CHURCH & CO'S SODA

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To insure obtaining only the "Arm & Hammer" brand Soda or Saleratus, buy it in "pound or half pound" cartoons which bear our name and trade-mark, as inferior goods are sometimes substituted for the "Arm & Hammer brand when bought in bulk. Ask for the "Arm & Hammer" brand SALSODA (Washing Soda).

Jan 4t

CHILD'S CATARRH SPECIFIC

Eighteen years of terrible headache, disgusting nasal discharges, dryness of the throat, acute bronchitis, coughing, soreness of the lungs, rising bloody mucus, and even night sweats, incapacitating me from my professional duties, and bringing me to the verge of the grave—all were caused by, and the result of nasal catarrh. After spending hundreds of dollars and obtaining no relief, I compounded my Catarrh Specific and Cold Air Inhaling Balm, and wrought upon myself a wonderful cure. Now I can speak for hours with no difficulty, and can breathe freely in any atmosphere.

T. P. CHILDS.

DANGER SIGNALS Do you take cold easily? Have you a cold in the head that does not get better? Have you a hacking cough? Is your throat affected? Are you troubled with hoarseness? Soreness of the throat? Difficulty in breathing? Have you pain in the head between and above the eyes? A sense of fulness in the head? Are the passages of the nose stopped up? Is your breath foul? Have you lost all sense of smell? Are you troubled with hawking? Spitting? Weak, inflamed eyes? Dullness or dizziness of the head? Dryness or heat of the nose? Is your voice harsh or rough? Have you any difficulty in talking? Have you an excessive secretion of mucus or matter in the nasal passages, which must either be blown from the nose, or drop back behind the palate, or hawked or snuffed backward to the throat? Ringing or roaring or other noises in the ears, more or less impairment of the hearing? If so you have **CATARRH.**

120,000 Catarrhal cases have applied to me for relief. Many thousands have received my Specific, and are cured. We add a few of the many hundreds of unsolicited certificates which have been sent to us by grateful patients—

My wife is entirely cured. I. V. COLLINS, Corcket, Tex.

Your remedy has cured me. M. ALSHULER, Mattoon, Ill.

Your treatment has cured my daughter of Catarrh, induced by a severe attack of measles.
JOHN W. RILEY, U. S. Express Agent, Troy, O.

Your treatment did me great good. I have not lost a day by sickness this year.
ABNER GRAHAM, Biddle Uni'sity, Charlotte, N. C.

I have used your Catarrh treatment, and am cured. A thousand thanks to you for so sure a remedy.
FANNIE DEMENT, Dyer Station Tenn.

The medicine did for me all you represented.
T. H. MESSMORE, Cadillac, Mich.

My health is fully restored. The horrid and loathsome disease is all gone. My lungs feel all right.
MRS. W. D. LINCOLN, York, Neb.

Your treatment has cured me; Your inhalers are excellent. This is the only radical cure I have ever found.
E. S. MARTIN, M. E. Church, Port Carbon, Pa.

I have so far recovered that I am able to attend church, can walk half a mile, have a good appetite, and am gaining all the time. MRS. A. N. MUNGER, Detroit, Mich.

Now I am cured; head free; air passages all open, and breathing natural. A thousand thanks to you for so sure a remedy. (JUDGE) J. COLLETT, Lima, Ohio.

I was thought to have had Consumption, and had suffered many years with what was really Catarrh, before I procured your treatment. I have had no return of the disease. (MISS) LOUIE JAMES, Crab Orchard, Ky.

Childs' Catarrh Specific

Will effectually and permanently cure any case of catarrh, no matter how desperate. The treatment is local as well as constitutional, and can only be obtained at Troy, O. We especially desire to treat those who have tried other remedies without success.

Childs' Treatment for Catarrh, and for disease of the Bronchial Tubes, can be taken at home with perfect ease and safety, by the patient. No expense need be entailed beyond the cost of the medicine. A full statement of method of home treatment and cost will be sent on application. Address **REV. T. P. CHILDS, Troy, Ohio.** *Mention this paper.*

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Many Agents are Making $5 to $10 per Day "HOW THE FARM PAYS."

SELLING OUR NEW WORK ON FARMING,

Single Copies mailed for $2.50. Send for Table of Contents and Terms to Agents. PETER HENDERSON & CO., 35 & 37 Cortlandt Street, New York.

The WORLD'S EXPOSITION

Opens Tuesday, December 16, 1884.

In the presence of the Presidents of the American Republics, viz: Arthur, of the United States; Diaz of Mexico; Barrios, of Guatemala; Bogran, of Honduras.

The Colossal Exhibit of all Time!

Sixteen (16) Immense Exhibition Buildings:

One—the largest building ever erected, another—the largest Conservatory in the World.

90 Acres of Space Under Cover!

Low Transportation Rates from all Points. Ample Accommodations at Reasonable Rates for all Visitors.

During the period of the Exposition, from December 16, 1884, to June 1, 1885 the temperature at New Orleans averages 65 Fahr. The lawn and shrubbery rem in green, flowers bloom, fruits ri en, and all kinds of vegetables grow and mature.

Full information promptly furnished. Address,

E. A. BURKE, Director Gener l,
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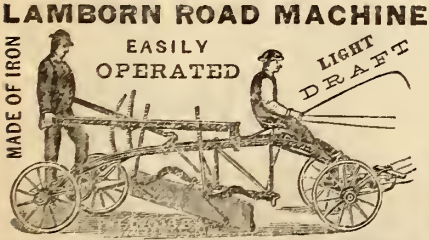

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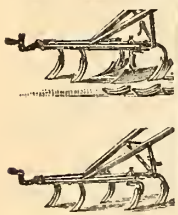

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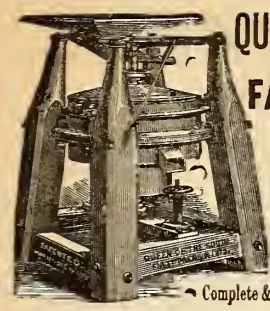

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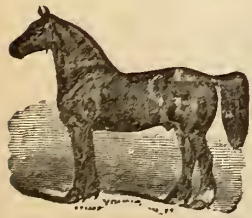

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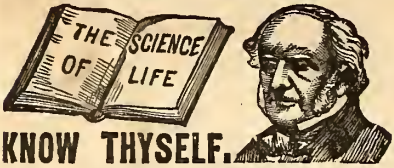

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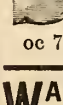

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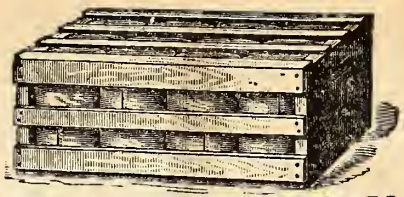

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